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DALI revamps compact speakers

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# HOME CINEMA Choice

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We check out an HCC reader's setup, p92

# WELCOME

All home cinema fans have a soft spot for *Jurassic Park*, Steven Spielberg's dinosaurs-come-to-life caper that rampaged through theatres in the Summer of 1993 armed with groundbreaking SFX and a revolutionary soundmix. First on LaserDisc, then DVD and Blu-ray, it's taken pride of place in our collections ever since. This issue we take a look back at the toothsome blockbuster (p30), pick out our other favourite classic creature features, and savour the hi-def release of new sequel *Jurassic World*.



## Is the biggest movie of 2015 another home cinema hero? See p98.

Of course, to really enjoy monster movies you need a monster setup. Sony's 65in 4K TV, Marantz's 11.2-channel AV processor and Cambridge Audio's CXU player all fit the bill – and they're all reviewed in this issue. Enjoy the show!

**Mark Craven**  
 Editor



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**Adrian Justins:**  
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# BULLETIN

→ **NEWS HIGHLIGHTS** BOWERS & WILKINS Revamped high-end speakers hit the UK  
**PANASONIC** Bringing hi-res audio to flatscreen TVs **ULTRA HD BLU-RAY** Tech giant delays 4K disc player  
**SIGNAL ONE ENTERTAINMENT** New indie Blu-ray label is 'made by film fans for film fans'  
**NEWS X10**  
The hottest news in bite-sized chunks **FAB AUDIO VISUAL** Charity begins at home cinema **AND MORE!**

## Bigscreen boost

Optoma HD28DSE → [www.optoma.co.uk](http://www.optoma.co.uk)

Optoma's new HD28DSE is the world's first projector to offer Darbee Visual Presence image enhancement processing. The tech, previously available via standalone hardware or high-ticket Blu-ray players, employs 'neuro-biologic algorithms' to tweak image depth and detailing.

In addition to this performance boost, the £700 HD28DSE claims a 30,000:1 contrast ratio and 8,000-hour lamp life in Dynamic mode, while the 1.1x zoom enables a throw ratio of 1.48-1.62:1. Connections include dual HDMI inputs with MHL connectivity for smart device hookup.



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## 8 B&W 800 SERIES DIAMOND ➔ PLAYLIST



# Jewels in the crown

Bowers & Wilkins 800 Series Diamond ➔ [www.bowers-wilkins.com](http://www.bowers-wilkins.com)



Bowers & Wilkins' new 800 Series Diamond speakers represent a near-total reimaging of its premium lineup, with only the Diamond dome tweeter being retained. New midrange and bass cones, a more robust bracing system and solid-body tweeter housing are just a few of the technological and engineering overhauls on offer. Available now, this new range consists of three floorstanders (802 D3, 803 D3 and 804 D3), a standmount (805 D3) and a pair of centres (HTM1 D3 and HTM2 D3). A range-topping 800 D3 (priced at an eye-watering £22,500/pr) will follow next Spring.

## Budget big screen



Projector specialist Vivitek is promising a marriage of value and performance

with the latest addition to its lineup of Full HD DLP projectors. Priced around £400, the 'ultra-portable' DH558 weighs in at just 2.3kg and should function happily in living room environments thanks to its claimed 3,000 lumens brightness and 15,000 contrast ratio. Other features include 3D capability with DLP Link, a five-segment colour wheel, MHL connectivity, a Dynamic Eco Mode for longer lamp life and a built-in 2W speaker. [www.vivitek.eu](http://www.vivitek.eu)

## Pioneering AVRs



It's only natural to worry that any new AV kit you buy will be securely future-proofed. And while nothing can ever be guaranteed forever, Pioneer seems to have most current causes for concern covered with its new 9.2-channel SC-LX59 and SC-LX89 (pictured) AV receivers – including support for Dolby Atmos and DTS:X, HDCP 2.2, and 4K (60Hz, 4:4:4) and HDR passthrough. The SC-LX59 (£1,400) and SC-LX89 (£2,200) are both available now, rated at 190W and 220W per channel respectively. [www.pioneer.eu.uk](http://www.pioneer.eu.uk)

## Glossy makeover

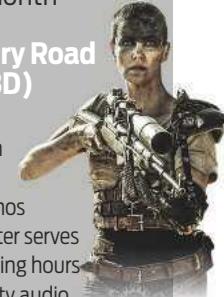


Cabasse has given its MT32 loudspeaker family a fresh lick of paint, introducing new gloss white and gloss black options alongside the previous ebony and walnut finishes. The new-look range consists of the Alderney and Jersey floorstanders (£1,200 and £900 p/pr respectively), the Antigua standmount (£500 p/pr) and the Soco centre (£340). While the MT32 lineup's Orion active sub isn't offered in the new finishes, the brand recommends using a Santorin 21 or 25 sub if a matching gloss finish is required. [www.cabasse.com/en](http://www.cabasse.com/en)

## PLAYLIST...

Team HCC spins up its disc picks of the month

### Mad Max: Fury Road (All-region BD)



The most compelling reason yet for giving your setup a Dolby Atmos upgrade, this platter serves up two awe-inspiring hours of reference-quality audio

### Metal Gear Solid V: The Phantom Pain (Various)



Hideo Kojima may be leaving the *MGS* franchise, but he clearly saved the best for last with this awe-inspiring sneak 'em up sequel

### Mr. Holmes (Region B BD)



Ian McKellen is magnificent in this revisionist yet affectionate drama that finds the ageing detective battling his failing memory

### A Blade in the Dark (Region B BD)



Lamberto Bava's meta Giallo is a welcome addition to 88 Film's fascinating 'Italian Collection'

### The Skull (Region B BD & R2 DVD)



The Marquis de Sade's skull brings death to all who encounter it in this underrated 1965 British shocker

# Panasonic plans TV revamp

Global TV boss hints a high-resolution audio 4K TV is on the cards

Panasonic is planning a radical revamp of its TV offerings for 2016, putting design and audio front and centre. Talking exclusively to *HCC*, Masahiro Shinada (director of the brand's TV business division) says that 4K/Ultra HD alone isn't enough to bring people back to the TV market.

While 4K may have expanded the TV business, sales will still fall short of expectations, he predicts. 'The economic situation is still not so good from a global point of view, especially for high-priced items'. However, while the financial landscape remains challenging, he is quick to dismiss speculation that Panasonic might be looking to exit the TV business. 'We have good customers and we make good-quality TVs. I am very confident we'll make it work.'

It's also still too early to expect mass-market penetration of OLED, he says (the brand's CZ950, pictured, launched at a steep £8,000). 'The market price is very high, but we think it's a very good successor to plasma.'



OLED: a 'very good' successor to plasma...



**Masahiro Shinada:** 'In Europe design is probably more important than sound quality. In Japan it's the opposite'

So Panasonic's 'Big Idea' is to innovate through design instead. 'From 2016, we will focus on how TVs actually fit into the living space. This year, we have conventional TVs, from next year we will change.' Unfortunately Shinada offers no clues as to just how radical next year's flatscreens might look.

### High-resolution television

While OLED and HDR are both occupying a good deal of Panasonic's R&D time ('HDR is at a very early stage. For me, the quality of colour is not perfect. There is more to be done...'), picture quality isn't Shinada's only concern. He also confides the brand is developing a high-resolution audio TV.

The challenge, Shinada believes, is to deliver a leap in sonic performance without compromising TV design. 'In Japan a thick bezel is okay, but not in Europe. Of course, sound quality depends on the capacity of the speaker box, so we're now developing a very unique high-resolution TV speaker. We'll be showing it in Europe next Spring.'

Looking ahead, it also seems that 8K is very much on Panasonic's road map. 'Every panel maker is now preparing 8K,' says Shinada-san. 'From next year, we can probably source the panels.' The market will take shape in 2018, he suggests: 'By then every Japanese manufacturer will be preparing consumer 8K televisions for the Tokyo Olympics.'

## EXTRAS...

Small items that could make a big impression

### Whoniverse

 Creating a planet-by-planet guide to the entire history of the *Doctor Who* universe would be a daunting enough task without trying to pull together info from the tie-in novels, audio productions and comics as well as the TV series. But that's just what Lance Parkin has done with this epic tome. Yours for £20.

### LEGO Wall-E

 The LEGO Ideas range (where fans submit proposals for future sets) delivers another winner with this high-quality version of Pixar's robot. Made up of 677 pieces, it's not the easiest LEGO build, but the end result is so ridiculously cute that it's worth the effort – and the surprisingly reasonable £40 cost.

### Star Wars: Absolutely Everything You Need to Know

 Created as a primer for the upcoming sequel, DK's new £18 hardback is packed with handy info on the earlier films and cartoons, but has been over-designed to the point where every page is somewhat of a chore to read.

# Spinning away from 4K BD

AV giant blames costs and streaming culture for delayed player plans

It may have made all of the early running with Ultra HD Blu-ray, but Panasonic has had second thoughts about leading the 4K disc revolution. 'We won't be releasing a first-gen UHD Blu-ray player in Europe,' Marketing Director David Preece told HCC.

Despite unveiling the DMR-UBZ1, a UHD Blu-ray recorder, at the recent Japanese CEATEC show, it seems the economics of launching a new hardware platform have prompted a rethink. 'In the Japanese market Blu-ray is a recordable product,' explains Preece, 'and that market is still huge. We've been turning over 2-3 million Blu-ray recorders a year. Player-only products don't exist there. So to develop a single player product for the European market, even regardless of 4K, is a big challenge. Now that the potential market size has been watered down by the streaming culture which is beginning to eat into packaged media, it presents an even bigger problem.'

An early hardware launch would come with a prohibitive price tag, he warns. 'Because of the changing dynamics in the market, the price point for UHD BD would have to be far greater than it was with the launch of Blu-ray. If you remember, we launched the format with a player at £1,300. Now the scale of economies would drag that up even further.'

Preece concedes the availability of 4K discs is vital if viewers want to enjoy all the benefits of UHD TV. 'In terms of delivering robust, stable HDR content,



**David Preece:** 'We want to come to market when there is a full launch of software ready to go from the Hollywood studios'

without any great bandwidth issues, it's incredibly important,' he says. 'It's a target we strive to achieve, but it has to be tempered with a commercial sensibility. Launching UHD Blu-ray is not a long-term investment that can be repaid in three years. It has to be quicker than that.'

Panasonic still plans on offering an Ultra HD disc player. Preece suggests that the brand will enter the UHD Blu-ray market once it has access to a low-cost single-chip manufacturing solution. 'Bringing a first-gen product to market without a single-chip solution (our launch offering would have been a two-chip 1080p/2160p device) is very expensive. What we want to do is come to market when there is a full launch of software ready to go. We need to work with the studios on that – and we're in a great place with our Panasonic Hollywood Lab. I would hope we can launch by the middle of 2016,' he says.

### Samsung and Fox still on target

Currently, the only brand to commit to UHD Blu-ray players is Samsung, which has previewed a player design, dubbed the UBD-K8500, for a Spring 2016 launch. Meanwhile, 20th Century Fox is the first studio to announce support, confirming a launch catalogue of *Kingsman: The Secret Service*, *Fantastic Four*, *Life of Pi*, *The Maze Runner*, *Wild*, *Exodus: Gods and Kings* and *X-Men: Days of Future Past*.

Blu-ray Disc Association board member Marty Gordon denies that UHD BD's delayed launch, and manufacturing cost concerns, raises a question mark over the format's viability. He told HCC: 'You wouldn't see Samsung and Fox pledge to launch if they weren't fully committed.'



# Amazon launches 4K Fire TV box

Streaming stick also upgraded with the addition of voice-controlled remote

Amazon has launched a new version of its Amazon Fire TV media player that supports 4K content, including streamed film/TV from Amazon Prime Video and Netflix. However, even if you don't have an Ultra HD TV, the company claims that the new box still offers a major upgrade over its predecessor.

The move to a MediaTek 8173C 64-bit quad-core processor and PowerVR Rogue GX6250 GPU promises a 75 per cent boost in power. And, in addition to the pre-existing 8GB of internal storage, the new Amazon Fire TV box provides up to 128GB of expandable storage via a microSD slot.

Amazon's upgraded media player also boasts an HDMI 2.0 connection, although the digital optical audio output has been dropped this time around.

### Sticking with voice control

Amazon has also introduced a new voice-controlled version of its Fire TV Stick. Priced at £45, it comes with a voice-controlled remote that can search for content by movie, TV show, actor, director or genre.



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## DIARY

Our calendar ensures that you don't miss out...

### → OCTOBER

#### 23: Paranormal Activity: Ghost Dimension 3D

The sixth instalment in the found footage fright franchise promises to finally deliver all of the answers fans have been waiting for. Get your stereoscopic scares in UK cinemas from today [www.paramountpictures.co.uk](http://www.paramountpictures.co.uk)

#### 26: Spectre



Bond is back on the big screen as the 24th film in the legendary spy series arrives in UK cinemas. This time out Daniel Craig is joined on screen by Monica Bellucci, Léa Seydoux and Christopher Waltz, the latter playing a villain with ties to 007's past... [www.sonypictures.co.uk](http://www.sonypictures.co.uk)

#### 31: Happy Halloween

It's the scariest night of the year, so why not kick back with some classic fright flicks on Blu-ray?

### → NOVEMBER

#### 02: Terminator: Genisys

The blockbuster sci-fi sequel/reboot hits DVD, Blu-ray and 3D Blu-ray, with the two hi-def versions boasting a Dolby Atmos soundtrack. [www.universalpictures.co.uk](http://www.universalpictures.co.uk)

#### 09: The Beatles: 1

A must-own for fans of the Fab Four, this set offers restorations of the pop group's promo films and videos with new stereo and surround mixes. Pick it up on Blu-ray or DVD in a choice of regular or 'deluxe' editions. [www.umusic.co.uk](http://www.umusic.co.uk)

#### 13: The Hallow

This extremely creepy creature-feature arrives at cinemas across the UK on what some people reckon is the unluckiest day of the year. Dare you venture out to see it? [www.uk.eonefilms.com](http://www.uk.eonefilms.com)



#### 23: Minions

A smash hit at cinemas around the world, this spin-off from the *Despicable Me* films is bound to prove even more popular now that it has been released to buy on DVD, Blu-ray and Blu-ray 3D. [www.universalpictures.co.uk](http://www.universalpictures.co.uk)

#### 19: HCC #254

The next issue of your favourite home cinema magazine hits the stands today packed with hardware tests, features, outspoken opinion and in-depth software reviews. [www.homecinemachoice.com](http://www.homecinemachoice.com)

## INTERVIEW

# Turning on the Signal

We caught up with indie newcomer **Signal One Entertainment** to find out how it plans to light up the Blu-ray market for UK film fans...

### Can you tell us a bit about the guiding ethos behind the label?

Signal One Entertainment has two core concerns: to release great films and produce excellent Blu-ray editions. We're launching with a range of exciting and brilliant films, all of which we love. These include films directed by such giants as Stanley Kramer (*On the Beach*), Richard Fleischer (*Mr. Majestyk*), Roger Corman (*The Trip*), Joseph L. Mankiewicz (*The Honey Pot*) and Ken Loach (*Hidden Agenda*), and we plan to give more and more high-calibre films deluxe treatment as we continue to expand the catalogue.

We like the idea of established classics rubbing shoulders with less well-appreciated films, and being able to state that each is as worthy of your time and attention as the next. It's also important to us to be bringing titles to Blu-ray for the first time in the UK, and – even better still – to be bringing titles like Corman's *Gas-s-s-s-s* and Jonathan Demme's *Last Embrace* back into circulation after their original outings on VHS years ago!

### What have been the biggest hurdles you've faced in getting up and running?

Getting a label off the ground requires a lot of hard work and coordination. Managing all the various parts of the process has been very demanding, but it's been a pleasure to work with so many great and generous people – whether that's the actors and filmmakers who have been so giving of their time (Ken Loach, Donna Anderson, Brian Cox, etc.); enthusiastic contributors such as Nathaniel Thompson (of Mondo-Digital.com), Paul Talbot (author of *Bronson's Loose! The Making of the Death Wish Films*) and David Thompson (director of the fantastic BBC TV documentary *Nicolas Roeg: It's*



There are plenty of cult favourites among Signal One's initial BD lineup

*About Time*); or the brilliant technical folks who have been working so hard behind the scenes to make everything look and sound great.

### Is there really a place for a new Blu-ray label when the public is constantly being told that physical media is dying?

While it's true that physical media sales have declined over the past decade, there are thankfully more than enough people out there who are still interested in the specific pleasures that well-produced packaged media editions can afford.

We have been working very hard to ensure that our editions really deliver on that front. Our releases are rich in the kind of quality additional content that we hope film fans will enjoy. After all, we're film fans too, and I think that's the best position to occupy if you're going to be responsible for releasing films in editions that are aimed at like-minded people.

### How important do you consider bonus features to be to the overall Blu-ray experience?

Extras are an essential part for any quality label's offer. Our aim is to engage with a fan base for whom film is a passion, not just a passing interest. These are people

who want to immerse themselves in film; to listen to experts and enthusiasts discussing it, to hear from those involved in making it, and to see archival promotional materials that show how it was originally marketed.

### How do you feel about the state of the Blu-ray market in the UK right now – and where do you see Signal One Entertainment fitting in to it?

The exciting thing about the current market place is that there are so many great labels out there, all of which take their audience very seriously. The likes of Arrow, the BFI and Masters of Cinema are obvious leaders in the field. They make it their business to release films with the best possible presentations and the most interesting and insightful extras that budgets will allow.

But it's also really great to see newcomers, such as 88 Films, doing everything they can to deliver solid editions of exciting titles, too. We obviously hope that we'll be able to sit alongside these labels, and do our bit to ensure that audiences continue to feel that their tastes and interests are being catered for.

This month's top 10 news stories in handy, bite-sized chunks...



## 1 Fall in love with film again

Following its previous Gothic and Sci-Fi seasons, the BFI has launched a new three-month season devoted to 'love' on the big and small screen. Running between October 19 and December 31, BFI Love features around 1,000 events taking place around the UK and promises something for everyone: from swooning silent classics to modern erotic thrillers. Visit [www.bfi.org.uk/love](http://www.bfi.org.uk/love) for event listings and booking info.

## 2 Sony expands HDR 4K lineup

In addition to its previously announced X94C and X93C Ultra HD TVs, Sony has confirmed that it will be bringing HDR support to its X91C, X90C, X85C and S85C (see p46) ranges via a network update.

## 3 Know your rights

The Consumer Rights Act 2015 came into effect at the start of October and sees the legislation expand its remit to cover digital purchases for the first time. Among the new rights for consumers are a 30-day time period to return faulty goods and replacement rights for faulty digital content including downloaded films and music.

## 4 8K TV lands in Japan

AV fans might be going gaga for 4K TVs here in the UK, but over in Japan Sharp will be releasing its first 8K screen on October 31. Costing around £86,000, the 85in LV85001 boasts a 7,680 x 4,320 panel resolution and requires all four HDMI inputs to be plugged into the same source to provide enough bandwidth to deliver 8K content. Shame that there's nothing to really watch on it beyond a few YouTube vids. See p28 for more.

## 5 HMV finds FindAnyFilm

HMV has become the latest retailer to be represented on FindAnyFilm.com, the online movie search website designed to promote the use of legal methods of watching movies. 'It's great to be back on FindAnyFilm, not only supporting the industry's need to tackle piracy, but also as another route for customers to find our online store,' says HMV's Head of E-Commerce Steve Partridge.

# News x10

## 6 LG adds Freesat to TVs

Freesat has announced a new partnership with LG Electronics that will see it provide its subscription-free satellite service on the Korean tech brand's TVs. In addition to coming as standard on LG's new LF650 and LF630 TVs, LG will also support the service across its existing satellite-enabled screens via a software rollout for customers – a first for Freesat.

## 7 Apple TV overhauled

Apple has given its digital media player its biggest upgrade to date. Arriving at the end of October in 32GB and 64GB incarnations, this latest version of Apple TV introduces Siri voice control and runs a new Apple tvOS that is reported to make app development even simpler. However, there is still no sign of support for 4K streaming.

## 8 Furious sales

Action blockbuster *Fast & Furious 7* has become the year's highest-grossing live-action DVD, Blu-ray and digital film release in the US to date, netting a massive \$52.5m during its first week on sale. The film shifted around 2.5m Blu-rays and DVDs during the period, with the hi-def incarnation accounting for 62 per cent of disc buys.

## 9 CD sales drop in the US

Sales of CDs in the US dropped by 31.5 per cent in the first half of 2015, according to recent figures from the Recording Industry Association of America. However, the losses were largely offset by a 23 per cent growth in streaming revenues and 52 per cent increase in vinyl sales.

## 10 Han shoots first in HD?

Ever since Disney purchased Lucasfilm back in 2012 rumours have circulated that the studio would eventually release the original theatrical cuts of the first three *Star Wars* films (aka *Episodes IV-VI*) on Blu-ray. Now filmmaker John Landis has kick-started the whole thing again, stating that Disney is going to do just that – although just how he knows this has yet to be revealed. Maybe he felt a disturbance in the Force...



## PREMIERE

What's happening in the world of TV and films...

### Rousey Housey?

U.F.C. fighter-turned-actress Ronda Rousey has signed on to take the role previously played by Patrick Swayze in MGM's upcoming remake of the 1989 'classic' *Road House*. Sounds fun.

### Taken taken to TV



Universal Television is teaming up with Europa Corp to produce a *Taken* TV series. However, rather than having a different member of Bryan Mills' family kidnapped each episode, it is planned as a prequel to the films and will reveal how Mills developed his 'very particular set of skills'. Just don't expect it to star Liam Neeson.

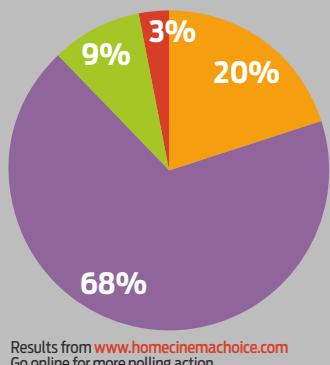
### Is Banks Angels' delight?

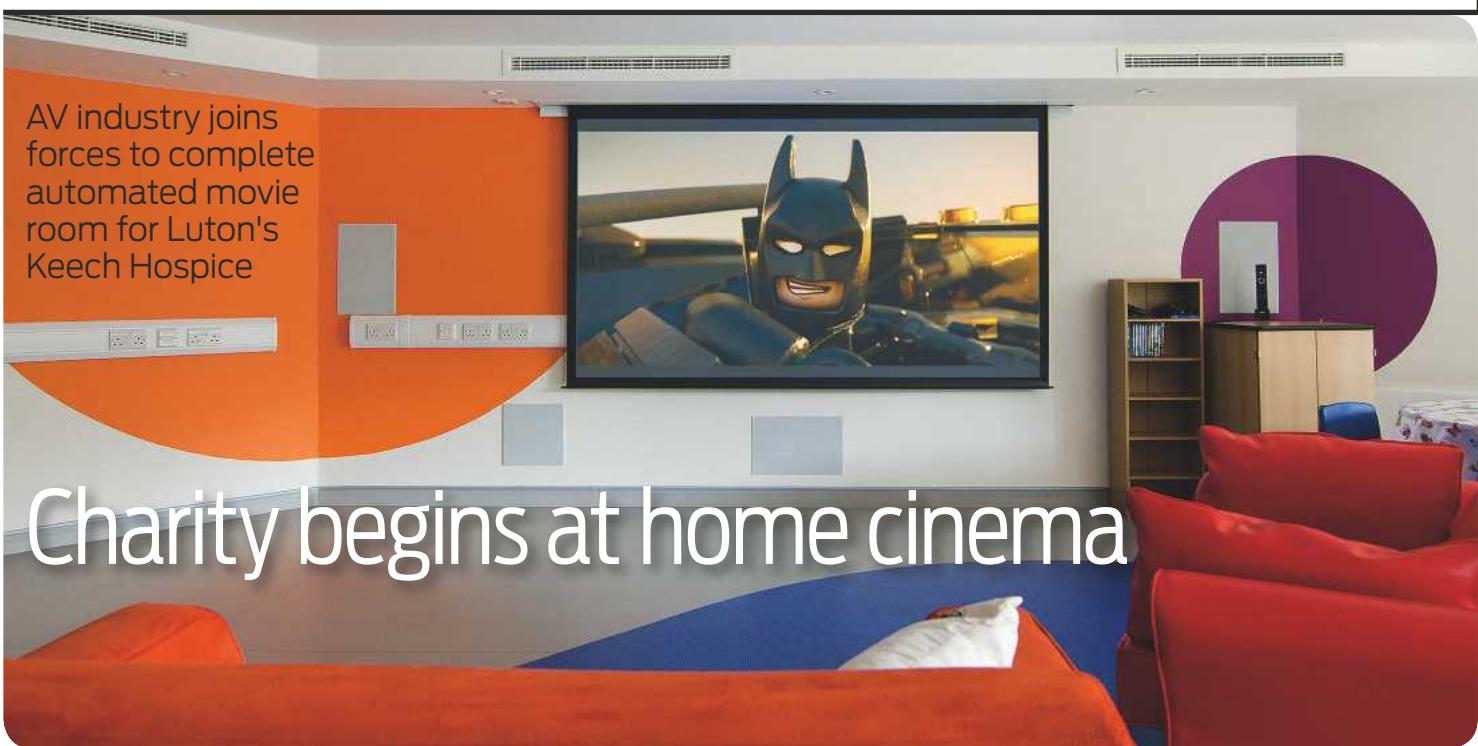
*Pitch Perfect 2* director/actress and all-round funny person Elizabeth Banks is reportedly in talks with Sony Pictures to direct and produce a big screen reboot of *Charlie's Angels*. Hopefully it'll fare better than the 2011 TV reboot, which was cancelled after just four episodes.

## WE ASKED...

What is the resolution of your main screen?

- Ultra HD
- Full HD
- HD Ready
- Other





## Charity begins at home cinema



Alli Harmer from Keech Hospice and FAB's director Phillip Warris at the opening of the new cinema room



St Albans-based installer FAB Audio Visual is the latest company to offer its cinema expertise to a great cause, turning a teenagers' day room at a local hospice into a home entertainment paradise.

The estimated total cost of the build (including hardware, lighting control and installation) would have been around £18,000 if FAB and various suppliers hadn't donated their time and wares. JVC UK provided the cinema projector, while Anthem AV solutions secured an Anthem MRX-500 receiver. The speaker system came from Monitor Audio, Invision UK donated the RTI processor and controller and Helvar Ltd magicked up the lighting control system. Additional kit in the room includes Xbox and PlayStation consoles, a Freeview TV receiver and an Oppo Blu-ray player.

### Giving something back

The idea for the build originated when FAB Audio Visual met one of Keech Hospice's fundraisers at a Chamber of Commerce event. Hearing that the children's hospice was in the process of having an

extension built, and that the plan was to incorporate an entertainment space, FAB offered to help. 'The directors had been looking to give something back for a while,' says the company.

A site visit was then organised to see what could be achieved, followed by an afternoon ringing kit suppliers to snaffle equipment. With that sorted, FAB soon returned to fit the in-wall speakers and subwoofer, the motorised drop-down projector screen, lighting and integrated control.

'The unit nurses and visitors have been impressed by the simplicity,' says FAB. 'They only need to press one button on the remote if the kids want to watch TV, a movie or play on the Xbox or PS3.'

'When the respective button is pressed the screen lowers from a trapdoor in the ceiling, the projector turns on, the AV equipment in the cabinet comes to life, the lights dim and the electric blinds drop into position.'

To cap it all off, the new room was officially opened by Harry Judd from pop-punk supergroup McBusted.

## Marantz goes slim with next-gen audio

DTS:X and Dolby Atmos grace revamped NR model, on sale now

**Marantz's long-running 'Slim Design' AV receiver range is getting a fresh injection of talent in the shape of a new model that adds object-based sound formats to the space-saving form factor.**

The 7.2-channel NR1606 allows for 5.2.2 Dolby Atmos speaker layouts (as well as DTS:X support, including DTS Neural:X upmixing, after a future update) and is in stores now priced around £600.

Power from this 10.5cm-high living room looker is rated at 50W

per channel – hardly a huge figure but our experience of previous slim-line models suggests it's more than adequate.

External sources can be plumbed in via the AVR's eight HDMI inputs – HDCP 2.2 and 4K



video (plus upscaling) are supported, as is HDMI passthrough when the unit is in standby.

Away from movie duties, the Marantz makes a case for itself as a network audio hub. Bluetooth, Wi-Fi and Ethernet connections grant plenty of flexibility for musos, and hi-res FLAC, WAV, ALAC and DSD files are all on the supported format list. Other networking tricks include AirPlay, Spotify Connect and internet radio, and smartphone/tablet control via an Android/iOS app.

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# Extra special agent

Agent Carter: The Complete First Season → Walt Disney → All-region BD & R2 DVD



Spurred on by the positive fan reaction to the *Marvel One-Shot* short that was included as an extra on the *Iron Man 3* Blu-ray, Hayley Atwell's Peggy Carter bagged her own TV series at the start of this year. The show – which sees Carter juggling life as a secret agent and a single woman in 1940s America – was initially overlooked by broadcasters on these shores, taking a whopping five months to hit UK screens. The good news is that fans won't have to wait quite so long to own the initial eight-episode run on DVD or Blu-ray, as it's set to arrive on November 30.



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# FIVE YEARS OF 3D TV!



In 2010, 3D hardware was fresh, Sky launched its dedicated channel and crosstalk was the new tech terror in town. **John Archer** remembers what happened next

**CAN IT REALLY** be five years since a TV and movie industry desperate to find the next big tech temptation set out to entice us and our traditionally 2D AV brains into the third dimension? 'Fraid so. In fact, it's a bit longer than that if you take the 2009 launch of *Avatar* as your 3D starting gun. At HCC, however, it was the Summer of 2010 when the format became a going concern, marked by the arrival in the UK of the first 3D TV sets.

A heck of a lot has happened to 3D in those five years – some of it good, much of it bad. So here we're looking back over its rollercoaster ride of ups, downs and more downs to see where it all went wrong. And maybe – just maybe – where it might still be able to get things right.

### Blue is the colour

So *Avatar*, then. Try as hard as you want, you simply can't ignore James Cameron's technical *tour de force* in any discussion of modern 3D.

Cameron's film, together with his abundant enthusiasm for his new 3D filmmaking 'toolkit', had people flocking to the cinema in record numbers, practically falling over themselves to don the 3D glasses eagerly thrust at them by giddy cinema staff.

It's just like being in the movie, we were told. You can't take your eyes off the screen. You just feel so much more involved with the characters. The action scenes are more actiony. All these claims and more were breathlessly flung *Avatar*'s way. And many of them held up to scrutiny. (More recently I've taken part in research commissioned by Vue Cinemas suggesting that watching 3D can make you smarter – although overall my IQ still seems to be suffering an inverse relationship with my age).

Unsurprisingly, the home entertainment industry pounced on cinema's new love affair with 3D. It was manna from heaven at a time when sales of HD TVs were stagnating – this was also the era of early smart TVs that were anything but. 3D-capable sets were rushed to market, irrespective of the fact that content was – and to some extent always has been – in painfully short supply.

And HD is key to the modern 3D story. One of the key elements of the 3D-on-your-telly push was the idea that you could watch 3D at Full HD resolution, rather than the available pixels in your HD screen having to be shared out to deliver a reduced-resolution stereoscopic image. TV makers achieved this by ramping up screen frame rates so that they could send out two consecutive Full HD images – one for each eye – in such quick succession that when seen through a pair of powered shuttering glasses your brain stitched them together to create a 3D effect.

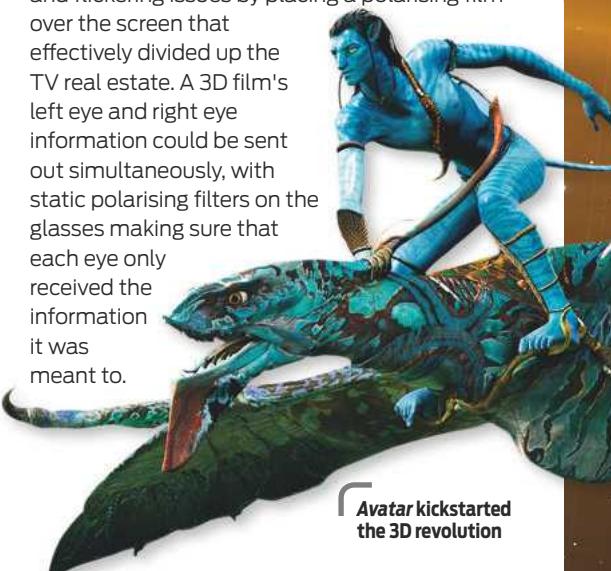
It was actually a pretty brilliant idea. The only problem being it was too advanced for the TVs trying to support it. So instead of being able to marvel at a 3D version of the gorgeously crisp, punchy, detailed images we'd become accustomed to seeing on our HD TVs, we instead found ourselves suffering, with headache-inducing regularity, problems like heavy ghosting noise, a flickering effect and quite painful reductions in a TV's brightness and colour punch.

The ghosting issue – known as crosstalk – was a function of early 3D TV screens not being able to refresh their images fast enough to keep up with active 3D's consecutive left eye/right eye approach. Information that should have, say, only gone to the left eye was hanging around on screen for so long that it was also sneaking into the frame created for your right peeper.

Plasma screens (remember those?) generally suffered less with crosstalk ghosting noise than LCD ones due to faster response times. They were hardly immune, though, plus they suffered much more with brightness loss when watching 3D than their LCD rivals. For early adopters, crosstalk was a big bugbear. And it actually still is, to an extent.

The flickering issue, meanwhile, was caused by the shattering effect of the glasses, and could be so pervasive – especially in bright rooms – that some brands' 3D TVs carried an epilepsy warning. Really, whatever way you looked at them (if you really had to look at them), those early active 3D images were a pretty unholy mess that bore minimal resemblance to the *Avatar* 3D spectacle you'd witnessed at the cinema.

Cue LG, riding into 3D town like some kind of white AV knight with its passive 3D solution. This sought to remove active 3D's crosstalk and flickering issues by placing a polarising film over the screen that effectively divided up the TV real estate. A 3D film's left eye and right eye information could be sent out simultaneously, with static polarising filters on the glasses making sure that each eye only received the information it was meant to.



**Avatar** kickstarted the 3D revolution

Some knowledgeable folk – including James Cameron – declared LG's passive approach to be the saviour of 3D. But there was a problem. Namely that passive 3D didn't deliver the Full HD experience we'd grown used to lapping up with our 2D Blu-rays.

Amidst a raging war of words with active rivals, LG tried many times to argue that its passive 3D pictures were still HD. But they simply weren't. You were aware of visible line structure in the image at times too, and jaggedness around curved lines.

The passive approach was also sensitive to vertical viewing angles – watch from an angle of much more than 10 degrees above or below the screen and the crosstalk ghosting issue passive 3D was designed to remove suddenly went nuts.

As if all the basic picture flaws weren't damaging enough to 3D's chances as a home entertainment >

## HAVE YOUR SAY ON 3D

HCC Facebook fans pick their favourite 3D platters

### Prometheus

'My favourite 3D movie. But my favourite Blu-ray for picture quality is *Pacific Rim*.' Steve Michael Clark

'*Prometheus* looks like a moving water colour painting.' Mike Wadkins

### Guardians of the Galaxy



'A brilliant film and outstanding in 3D!' Stephen Dunn

### Pacific Rim

'Love the movie and it's breathtaking visually.' Wayne Wilson

'A great demo source for both 3D picture quality and sound – despite being an average film!' Barrie Head

### Dredd

'It has to be this for me.'

Alex Russell

### Avatar

'Still my favourite.' Patrick Peeters

'My first ever 3D film and the colours still amaze me, as well as all the visual effects. Stunning!' Robi Lee

format, it wasn't just people prone to epilepsy who were earnestly warned off watching 3D by the very TVs they wanted to watch it on. Also on the 3D 'health advisory' list were pregnant women, people with a history of strokes, kids under six and anyone who felt sleepy, tired, sick or, um, 'incoherent'. Call us old-fashioned, but any home entertainment technology you're warned not to watch when you're pregnant, tired or drunk was never going to fly.

### The rise of the ret-con...

Nor was it only early 3D hardware's inability to recreate the joys of *Avatar* that damaged the format's image in its formative years. Hollywood also set about beating its new cash cow to death, churning out in *Avatar*'s wake numerous horrific-looking '3D' movies that had been shot in 2D but converted into 3D by some primitive post-production processes. The 3D in the remake of *Clash of the Titans*, for instance, looked about as sophisticated as the parallax scrolling on an Atari ST.

This and other 3D abominations turned 3D into a cheap effect added for no other reason than to enable studios to charge a premium for cinema tickets or Blu-rays. Pretty much any notion of 3D as a new artistic movement was trampled under a money-grabbing stampede that reached its nadir from a home cinema perspective when Twentieth Century Fox did a promotional deal with Panasonic that meant that for what felt like years the only way you could get the 'killer app' of *Avatar* on 3D Blu-ray was by buying Panasonic hardware. Crazy.

And the technical and marketing issues prevalent in 3D's early days were joined, of course, by a couple of significant 'lifestyle' factors. First, TVs then weren't generally big enough to recreate the sense of immersion you get when a 3D image fills your field of

vision. Even now, there's an argument to be made that only 3D projectors deliver images big enough to produce a satisfying 3D experience. Second, and worst, people just couldn't be bothered with the glasses. Especially in active 3D's case, where the glasses could cost more than £100 a pair and regularly need recharging.

**'Hollywood set about beating its cash cow to death, churning out horrific-looking 3D movies converted from 2D'**

Ultimately so much damage was done to 3D's reputation in the first three to four years of its life that it's hardly surprising it's an irrelevance to the mainstream TV market. Increasingly it's being dropped from the feature lists of even mid-range TVs. A browse of industry stats confirm that just two per cent of *The LEGO Movie*'s Blu-ray sales were in 3D, and even in its most natural habitat, the cinema, 3D has seemingly lost its lustre. In 2014 just 28 major films came out in 3D, versus 34 in 2013 and 39 in 2011. Last year 3D versions of films accounted for 39 per cent of takings versus 53 per cent in 2012.

The amount of 3D content available is also dying a death – not great when really there's never being enough of it to sustain interest in the format. Sky

recently closed its 3D channel, for instance, and in the US Disney has pretty much stopped releasing its films on 3D Blu-rays. Perhaps most damning and damaging



3D marketing was far from subtle...



<sup>†</sup> Screen image shown is simulated

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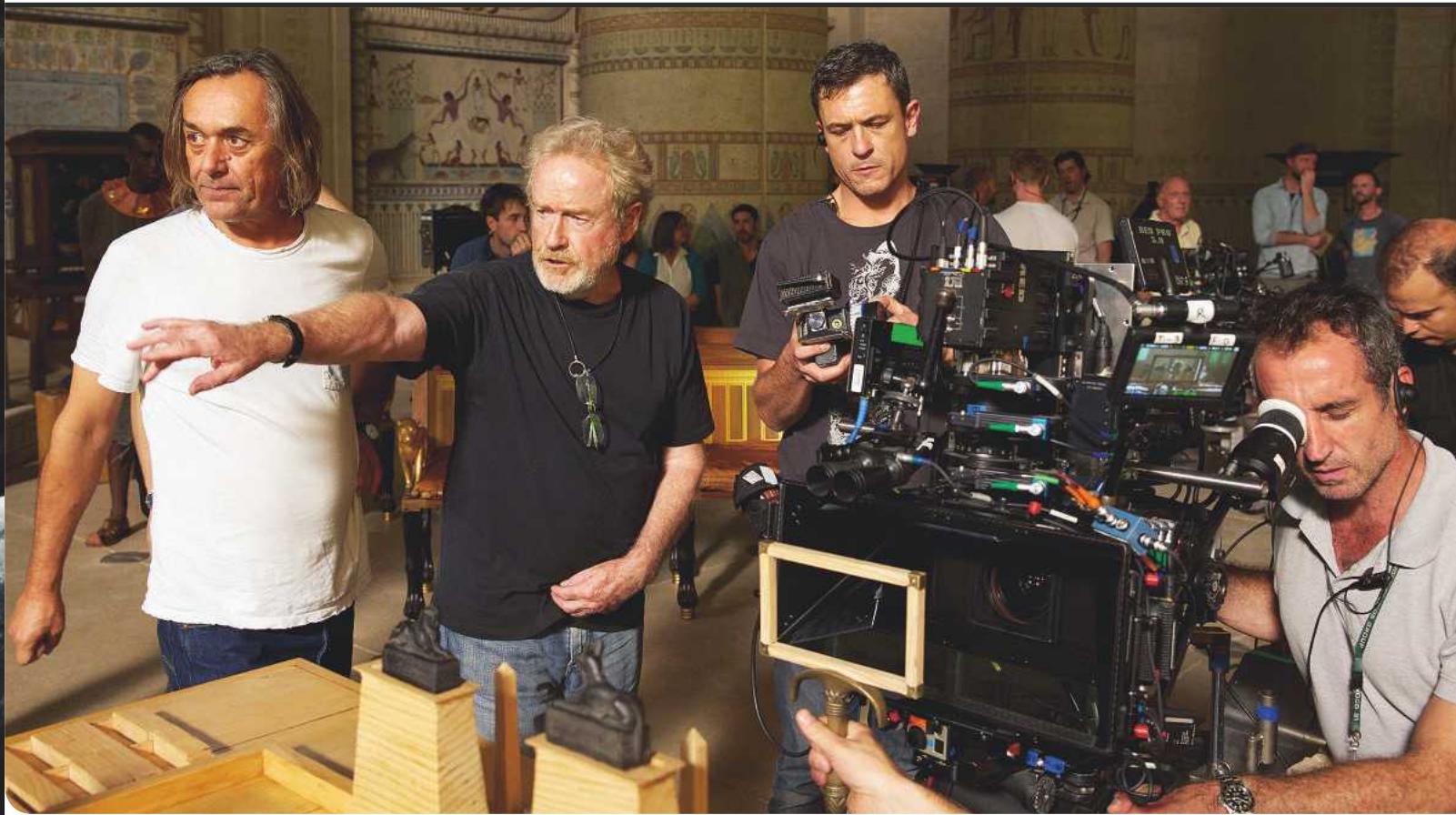
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\* The Freeview play service and channels are subject to change and may be changed from time to time. Minimum broadband speed of 3mbps required for catch up and on demand services. Netflix available in late 2015. Streaming membership required.

# NETFLIX

**HUMAX**  
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Ridley Scott on the set of *Exodus: Gods & Kings* – now followed by *The Martian* as another shot-in-3D movie

of all, the new Ultra HD Blu-ray specification includes no support for 3D – and when we spoke recently to the Blu-ray Disc Association, we were told it wasn't something that studios pushed for, regardless of the technical issues.

#### Holding out for a comeback

And yet for all 3D's self-inflicted death by a thousand cuts, I – and many of you, judging by the letters we receive – still have a soft spot for 3D. And I think there's some grounds for hope that 3D might make a comeback, albeit only in the dedicated AV world.

Why? Firstly because both the TV manufacturers and (with some dishonourable exceptions) movie studios have got a lot better at 'doing' 3D. The best LED LCD TVs are now brighter and faster

with their crosstalk-related response times, while the arrival of 4K panels has enabled passive 3D TVs to deliver their more relaxed stereoscopic approach with Full HD Blu-rays, minus the jaggedness and loss of resolution.

The average TV screen sizes we're buying have ballooned over the past couple of years too. More of us now watch TVs capable of delivering 3D images that fill a good chunk of our field of vision.

Some are hoping, too, that the arrival of TVs with greater screen resolutions might make glasses-free 3D workable. Given the awful experiences I've had with glasses-free 3D to date – including on a bleeding-edge 8K-resolution, 110in Samsung LCD TV at 2015's CES – I personally remain sceptical that this will ever work satisfactorily.

On the filmmaking side of things, a few key directors – most notably Peter Jackson and Ridley Scott – have taken the format seriously, shooting in 3D rather than just adding it in post-production. And 2D-3D conversion processes have improved massively, with a couple of our favourite 3D experiences – *Pacific Rim* and the 3D re-issue of *Titanic* – starting out as 2D masters.

We're intrigued, too, by the use of high frame rates for improving the clarity of 3D – something Peter Jackson employed on the *The Hobbit* trilogy, and which James Cameron is also purportedly working with for *Avatar 2*.

Yep, *Avatar 2*. For better or for worse we appear to have come full circle with 3D, with a single upcoming (2017) film from a single visionary director again looking like the biggest hope for the flagging 3D industry. Let's just hope that if Cameron and his blue-skinned friends do indeed reignite the 3D flame, the rest of the film and AV industry does a far better job of fanning it than it did last time around ■



*Pacific Rim* was lensed in 2D, but enjoyed a successful post-production 3D makeover

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Japan used to be the place to see tomorrow's tech today, but our former home cinema faves are on the retreat, writes **Jamie Carter**

**IT MIGHT BE** the undisputed home of AV, but there is only one curved TV in Japan. While this will please some home cinema purists, the general absence of the *en vogue* 'gently contoured' TV in a country that has always prided itself in having bleeding-edge technology says a lot about the dwindling status of Japan in the world of electronics.

It also says a lot about national loyalty because the TV in question – LG's 65EG9600 – will probably not sell well here, even though it took pride of place in three branches of BIC Camera I walked into in Tokyo, Nagasaki and Kagoshima on a recent visit. You'll find Korean restaurants on numerous streets in Japan, but the country's TVs are not nearly as common.

Despite its smartphones being on sale, Samsung's TVs are impossible to buy in Japan, while LG TVs tend to be cut-priced cheapies. 'Samsung doesn't sell its TVs in Japan,' reveals Jusy Hong, Principal Analyst, TV Systems at tech-watching firm IHS Technology. 'It withdrew its TV business several years ago, while LG's market share is 3 per cent. Hisense from China sells TVs in Japan, but its market share was 2.2 per cent in 2014.'

#### Behind the curve

From being ahead of the pack for a generation, Japanese consumers now find themselves firmly behind the curve. And the 65EG9600 also happens to be the only OLED TV on sale in Japan, too. Granted, that's soon to be corrected by the appearance of the recently announced Panasonic TX-65CZ950, but few believe that Japan can return to the top of the perch when it comes to TVs, however technically advanced the new products may be. In 2014, 37 per cent of TVs were produced in Korea, 22 per cent in China and just 19 per cent by Japan-origin companies. That's down from 35 per cent in 2011.

We could be witnessing the end-game for the big Japanese TV brands, but you wouldn't know from a stroll around one of the nation's giant

# TECHNOLOGY TOKYO TV DRIFT?

megastores, where the latest and greatest 'made in Japan' TVs are abundant. There are 'Japan Pro Spec' labels everywhere and exclusives galore – such as the Japan-only line-up of Purios TVs from Sharp – while Full HD models have been rebranded as '2K' TVs. I even spotted the Sharp LC-80XU30, a 4K TV that can upscale to 8K (for a mere £9,000), and the company has also just announced the LV-85001, a native 8K set due to go on sale at the end of October for an eye-watering £86,000.

'Sharp dominates the domestic market, but struggles in other markets,' says Hiromi Yamaguchi, analyst for Euromonitor in Tokyo. 'As part of Sharp's restructuring effort, it will be focusing on the Japanese domestic market – and similarly, for Panasonic and Toshiba, the domestic market is critical to the companies' bottom line, so there will be Japan-exclusive models.'

Sharp is the clear frontrunner in Japan in TV. However, the vast banks of sets in electronics shops are slightly repetitive in terms of branding. While TVs in all shapes, sizes and colours from Hitachi, Fujitsu, NEC and Pioneer used to be common, Sharp is joined now only by Panasonic, Toshiba and Sony. It has the highest market share at around 37 per cent, followed by Panasonic at 21 per cent and Toshiba at 17 per cent. And what of Sony? 'Sony is at 11 per cent,' says Hong. This seems particularly shocking. Who didn't know someone a decade ago who lived in a 'Sony home'?

#### Navel-gazing

After a punishing decade in foreign markets that has seen massive losses, it's now all about survival for Japan's household names. The problems date back to some badly-timed navel-gazing around the turn of the century – and that was despite the first plasma displays coming from Japanese companies, notably Pioneer. 'Japanese TV brands didn't catch up with the fast-moving TV industry trend towards flat-panel displays,' explains Hong. 'It's an equipment industry, therefore scale is the most important. Korean companies aggressively invested



in the flat-panel display industry while most of the Japanese brands enjoyed CRT and its picture quality.'

To make matters worse, Japanese companies under-estimated the rapidly evolving LCD technology, with all of them investing in plasma production to some extent. Meanwhile, LG and Samsung developed their own LCD panel facilities and supplied other TV manufacturers, thereby creating massive economies of scale. That same perfectionist attitude that saw it dominate global electronics for decades was eventually its undoing; the Japanese TV industry paid the price for always trying to create the best-quality TVs that were built to last. Since technology began to change faster and got cheaper, the world has wanted only throwaway tech that can be replaced every few years. Japan missed the window on this phenomenon.

The current fight for market share at home is the reason for all of the exclusives and high-spec offerings at Tokyo's 17 BIC Camera stores, or in the eight-floor Yodobashi Akiba megastore in *otaku* (translation: geek) district Akihabara Electric Town. It's largely caused by a mass retreat from the rest of the world. Sharp hasn't been a factor in the UK market for sometime, while Toshiba pulled out earlier this year. 'Most Japanese TV makers are now moving from the direct TV production business model to brand-licensing,' laments Hong. 'Sharp-branded TVs in Europe will be made by UMC, while in the USA it's managed and operated by Bestbuy. Over 70 per cent of Sony's TVs are made by Foxconn and Toshiba TVs in North America and Europe are under brand licensing with Compal.'

'By 2020, most Japanese TVs will be produced by other OEM and brand licensing business models.'

In short, if you want a real Japanese TV, you're best heading to Japan.

#### Made in Japan

Such a situation seems ripe for the likes of Samsung and LG to exploit, but despite the decline of Japanese TV producers there seems no appetite for cheap foreign imports inside the country.

Yamaguchi stresses the loyalty of Japanese consumers to domestic brands such as Sharp and Panasonic. 'Some consumers even pay attention to where the TVs are made, because they believe Japanese brands or Made-in-Japan brands assure a higher quality,' he says, adding that this tech patriotism will almost certainly continue. 'If anything, Japanese consumers would switch to other less-known Japanese brands such as Funai and Orion for the cheaper alternatives.' Cue Panasonic's 'Beautiful Japan 2020' campaign, which is clearly aimed at encouraging national loyalty in the run-up to the Tokyo 2020 Olympic Games, when 8K TV broadcasts are due to begin in the country.

However, standing in front of the frankly huge display area set aside for the 65EG9600 in BIC Camera Ginza in central Tokyo, it's hard not to think that Korea is beginning to assert its dominance. Such has been the work on both their brand names and products in the last decade that few would argue about the quality of LG and Samsung TVs. Is the arrival of the 65EG9600 another nail in the coffin for the Japanese TV industry? 'It's the first time the curving display is fitted onto TVs [on sale in Japan] and this has caught media attention as well as consumer interest,' shrugs Yamaguchi. 'The commercial success of such new TVs is yet to be seen, but it is enough to show consumers what Korean TV manufacturers are capable of in terms of technologies, one of the major competitive advantages for Japanese manufacturers.'

But that loyalty issue remains. It's to be commended in theory – all home cinema fans have understandable nostalgia for Japan's historic place in the industry – but can it last? For a market that's all about the next, the biggest and the best, can Japanese consumers afford to only look for that Made in Japan logo? Time will tell. The country may well start mass-producing 8K TVs and OLED TVs in the next few years, but only those in Japan will probably see them. For most of the world, the Japan-made TV is home cinema history ■

#### OLYMPIC AMBITION

8K broadcasts in sight for Tokyo 2020

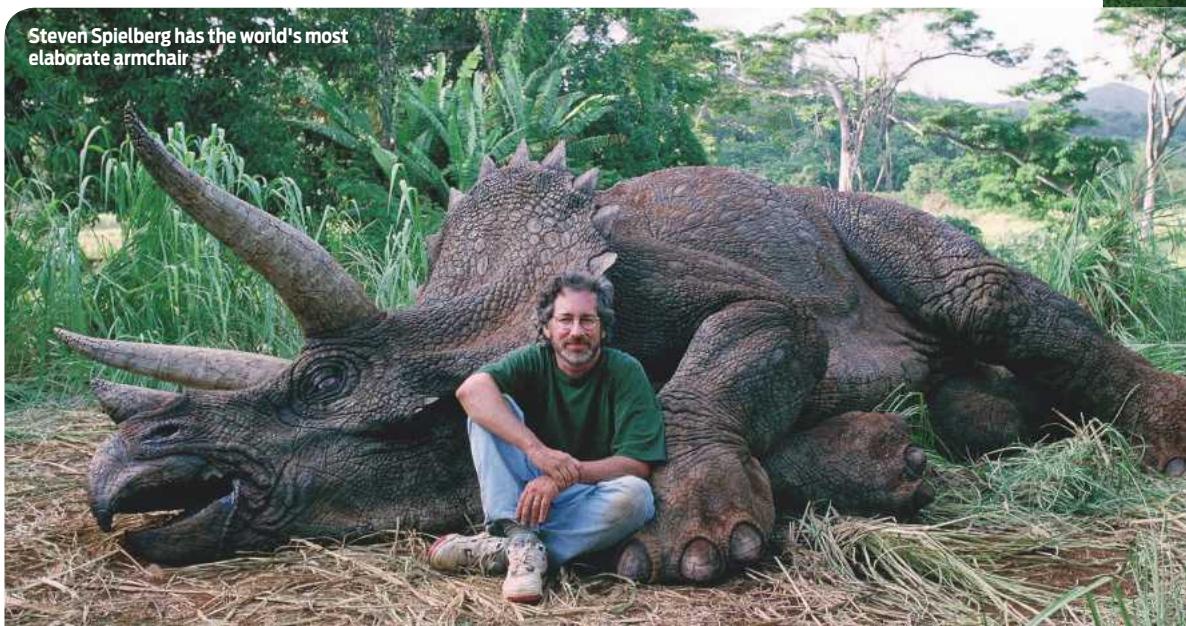


It may be more than four years away, but Japan's tech industry is already gearing up for the Tokyo 2020 Olympics, earmarking the games as the perfect showcase for 8K broadcast and display technologies. Not that pixel-freaks will need to wait that long. Trials – over satellite – are scheduled to begin next year, so that by 2020 the process will have matured into 'a full broadcasting service' according to public broadcaster NHK.

# WHEN DINOSAURS RUINED HOME CINEMA

*Jurassic World* may have been the popcorn blockbuster of the Summer, but it owes everything to Spielberg's original masterpiece. **Steve May** brings latecomers up to speed...

**Steven Spielberg has the world's most elaborate armchair**



**IN 1993, STEVEN** Spielberg's adaptation of Michael Crichton's science-fiction thriller *Jurassic Park* gripped audiences with a simple question: 'Could this actually happen?'

Not only did Crichton's sticky amber science seem plausible, dinosaurs really did look like they could walk the Earth once more. Even today, the film's revolutionary visual effects retain their grin-inducing impact. They have a solidity and prehistoric weight that remains utterly convincing, helped in no small measure by a soundmix that remains one of home cinema's greatest joy rides.

*Jurassic Park* is unique for many reasons, not least because it was the first film to usher the multichannel DTS digital sound system into movie theatres, and helped bring cinema surround to many first-gen home theatres.

On LaserDisc, it employed the separate LFE channel to dramatic effect. Profound bass became synonymous with the stomp of a Tyrannosaurus rex. There can't be a soul on the planet that doesn't know what that cup of rippling water heralds...

For its Blu-ray debut, the title was remixed into 7.1 DTS-HD MA, resulting in a statement AV release and a T-rific addition to any AV-holic's library; John Williams' unforgettable score became a joyous celebration of awe and wonder, every bit as dynamic and huge as the Park deserves.

While almost everyone has a soft spot for the original, 1997's *The Lost World: Jurassic Park* remains a little more divisive. Rather than retread old bones, the follow-up opts more for high-spirited monster movie hokum. Interestingly, *The Lost World* also marks the first collaboration between Spielberg and cinematographer Janusz Kaminski, resulting in a darker vision which translates particularly well to Blu-ray. 2001's *Jurassic Park III* (which saw Spielberg hand over

directing duties to Joe Johnston) is altogether more frothy; fun while it lasts but less memorable.

Spielberg says he simply became too busy to develop more sequels – but his interest never waned. '*Jurassic World* is almost like seeing *Jurassic Park* come true,' he stated earlier this year. 'We wanted to fulfil this dream in *Jurassic World*: to have a truly working theme park devoted to this miracle of

**'*Jurassic Park* is unique for many reasons, not least because it was the first film to usher DTS into movie theatres'**

creating dinosaurs from DNA. This is the realisation of Michael Crichton's dream. This, hopefully, becomes the dream that the audiences have always wanted to see.'

Longtime Spielberg collaborator Frank Marshall says it was worth the wait: 'It's taken this long for the right idea to materialise... Steven's idea of having the fully-realised theme park was the anchor and key to this story.' The box office seems to agree.

#### **The origin of sound**

It was, as said, *Jurassic Park* that introduced the world to DTS audio.

That particular origin tale is now firmly part of cinema sound lore: in 1993, funded by Universal Studios,

Digital Theater Systems (aka DTS), convinced director Steven Spielberg that his dinosaurs would sound altogether more realistic in multichannel DTS audio.

Almost overnight, 876 DTS cinema playback systems were installed across US theatres in time for the Park's opening.

## THE CLASS OF '93

The films that won – or lost – at the box office

### Jurassic Park

The biggest movie of the year by some margin, Spielberg's dino epic turned its \$63m budget (plus promotional costs...) into a final worldwide gross of over \$1bn

### Mrs Doubtfire



Robin Williams dressing up as a Scottish nanny obviously had massive appeal in 1993 – *Mrs Doubtfire* family-comedied its way to a \$440m global haul

### The Fugitive



The year's third-biggest flick was this thriller based on the 1960s TV series. Harrison Ford led the cast as wrongly-accused Dr Richard Kimble in a script penned by David 'Critters' Twohy

### The Firm

Bagging fourth spot with worldwide takings of \$270m was this Tom Cruise/John Grisham vehicle. Another Grisham adaptation – *The Pelican Brief* – also made 1993's top ten

### Last Action Hero



Big things were expected of this post-modern Arnie actioner, but it only managed takings of \$137m against its \$85m budget, making it the Austrian Oak's first big flop

The move legitimised DTS as a rival to Dolby and ensured the world of theatrical sound would never be quite the same again.

*Jurassic Park* went on to win Academy Awards for Best Sound and Sound Effects editing, as well as Visual Effects. Oscar-winner Gary Rydstrom told HCC back in 1997 that the starting point for his sound design was always to create an immersive experience. 'The most obvious thing we do is pan the sound to fit the image on screen,' he said. 'A lot of what we do with surround is to encompass the audience, to make it seem like an interactive experience wrapped around your head. It's a matter of building a spatial dimension in the theatre which translates to a spatial dimension in your home.'

Rydstrom added that an enormous amount of prep went into JP's mix, a routine he adopts for most projects. 'Before I get to mixing and panning in the studio, much of my time is spent organising the material to fit the film. The way I approach it is to collect interesting sounds. Sometimes it's not clear until I sift it where those sounds are going to land. I have broad ideas at the beginning – I might look for a sound that has a particular emotional character, an ambience, but it's only later on that the sound is fitted in place. On location we are limited by what the real world gives us. So we divvy it up for this scene, that scene. We try to plan sounds for most impact.'

Spielberg says it was never his intention to set about revolutionising movie-making with *Jurassic Park*. He simply wanted to do justice to Crichton's best-selling yarn. 'It's not up to me to decide what a benchmark is,' says the director. 'I just try to tell stories. It's up to other people to figure out whether your stories are successfully told or not, but I know that technologically it was a benchmark for the entire industry. Here were characters that were digitally created on a computer, that looked completely authentic in any form of lighting or even atmospheric condition. We even had the digital T. rex in rain.'

The film was eventually retconned into 3D for a theatrical reissue in 2013 to celebrate its 20th anniversary – artistically this was never anything that needed to be done, but it did drop more Jurassic coin into the Universal vault thanks to over-priced 3D tickets. *Jurassic Park* is now one of the few films to have surpassed \$1 billion in ticket sales.

### Making monsters

The creative team responsible for *Jurassic Park*'s denizens is in turn appropriately legendary. Special effects wizard Stan Winston created the wonderful animatronic dinosaurs (earning him a movie credit for 'Live Action Dinosaurs'), Dennis Muren of Industrial Light and Magic handled the digital compositing (aka 'Full Motion Dinosaurs'), while Phil Tippett contributed stop-motion effects ('Dinosaur Supervision'), a role he expanded upon for *Jurassic World*.



*The Lost World... ramps up the scares...*



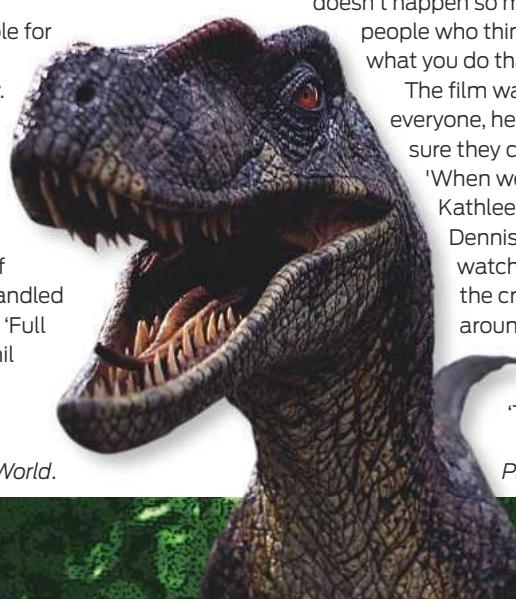
*Sam Neill is up against it in JP III*

Tippet has fond memories of his dino wrangling days. HCC caught up with him during the Summer – just hours before he was due at the *Ted 2* premiere, another movie with Tippett Studio VFX. 'I was always interested in prehistoric animals,' he told us. 'I studied a lot, worked with palaeontologists and made a 16mm dinosaur movie which I hoped to sell to educational channels – it didn't sell, too scary – but that led to the formation of Tippett Studio, where we did a documentary called *Dinosaur* in 1985.' The SFX wizard says his team created 'a neighbourhood of palaeontologically correct characters, all stop-motion on miniature sets.' It was this, he believes, that helped get him the original gig on *Jurassic Park*.

The special effects business has changed considerably since those early pioneering days on *JP*. 'Back then it was a lot more fun,' he confides. 'It's always been the process of making special effects that gives me the greatest satisfaction. The projects I remember the most are those when you click and have that camaraderie with the crew.' It's like being part of a symphony orchestra, he says. 'Working in tandem generates a tremendous amount of energy. Directors like Spielberg, [George] Lucas and [Paul] Verhoeven are very inclusive about what they want when it comes to your input and involvement. You really feel like you're part of the creative team. That doesn't happen so much now. There are a lot of people who think they know more about what you do than you do.'

The film was a learning curve for everyone, he recalls. No one was entirely sure they could pull the project off.

'When we wrapped it up, producer Kathleen Kennedy invited myself and Dennis (Muren) to screen it. We watched it, and at the end when the credits rolled, Kathleen turned around and said: "So what do you think?" I said "Well... it's not terrible!" and she replied "That's what I thought..." Indeed. Terrible, *Jurassic Park* is not ■'



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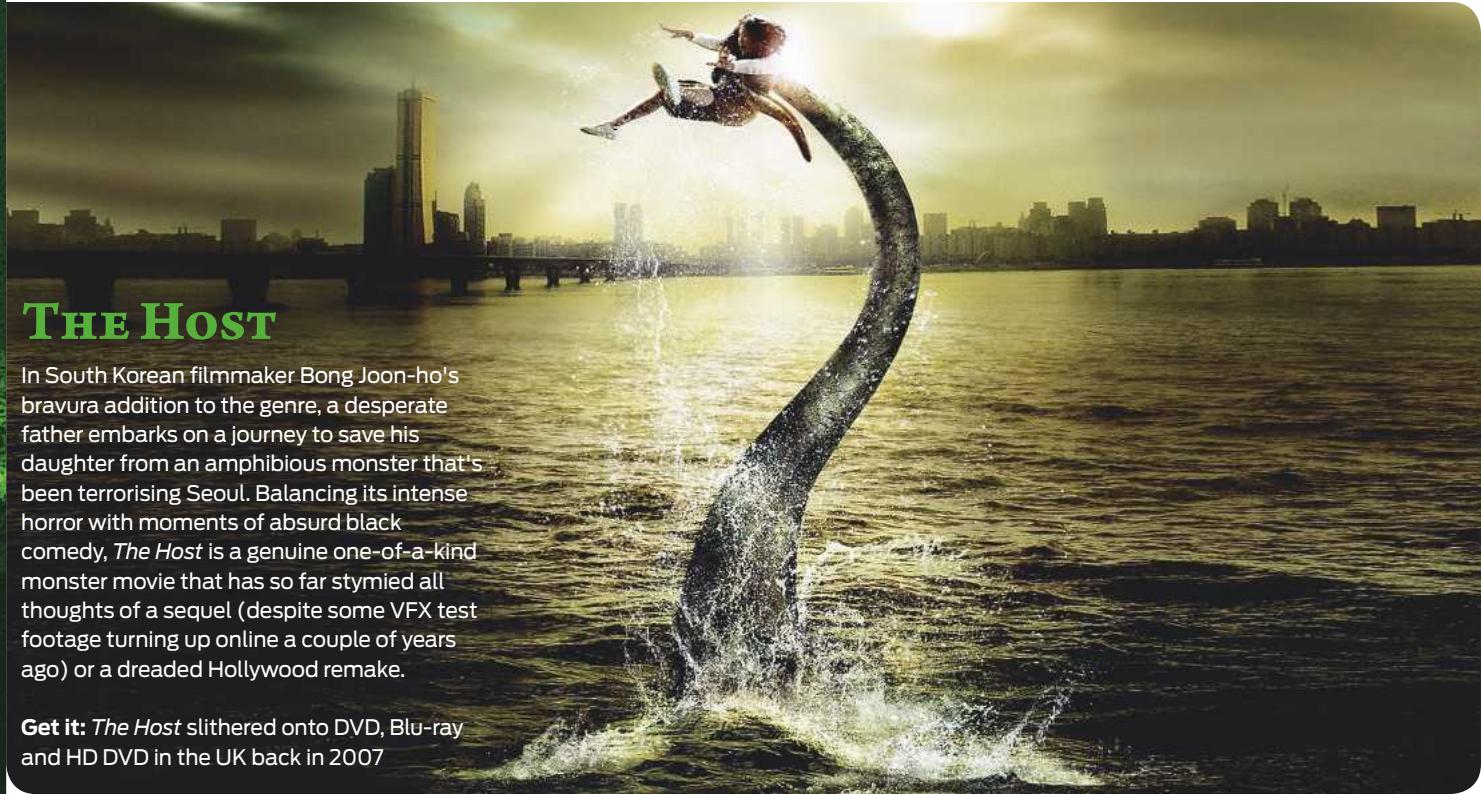
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# Big beasts on film

If your monster movie collection only runs to *King Kong*, *Jaws* and *Godzilla* then you're missing out on some over-sized fun. **Team HCC** picks ten more titanic titles



## THE HOST

In South Korean filmmaker Bong Joon-ho's bravura addition to the genre, a desperate father embarks on a journey to save his daughter from an amphibious monster that's been terrorising Seoul. Balancing its intense horror with moments of absurd black comedy, *The Host* is a genuine one-of-a-kind monster movie that has so far stymied all thoughts of a sequel (despite some VFX test footage turning up online a couple of years ago) or a dreaded Hollywood remake.

**Get it:** *The Host* slithered onto DVD, Blu-ray and HD DVD in the UK back in 2007



## ROGUE

Sam Worthington and Radha Mitchell star in this immensely fun Australian horror-thriller that pits them against a giant, angry crocodile – the sort that would have had Mick Dundee running for cover. Director Greg 'Wolf Creek' McLean mixes the toothsome death scenes with some stunning outback cinematography. A flop at the box office, *Rogue* has rightly found plenty of fans on disc.

**Get it:** The sub-£10 UK Blu-ray release includes bonus features and DTS-HD 5.1 sonics

## THE BLOB

The 1958 original has its merits but for our money the 1988 remake is better. Sure, the gloopy SFX remain unconvincing but helmer Chuck Russell and co-writer Frank Darabont (see *The Mist*, opposite) waste little time in creating an action-packed monster movie that sees its titular star racking up an impressive body count. Sadly, although the ending left the door open for a sequel, it was never made.

**Get it:** Released last year as a region-free US BD by Twilight Time – but the run was limited...

## TREMORS

Released in 1990, this homage to the B-movie creature-features of the '50s pits Kevin Bacon and Fred Ward against subterranean monsters with a taste for human flesh. Smart and intensely funny, *Tremors* snared an appreciative audience on video, leading to four DTV sequels to date (the latest, *Tremors: Bloodlines* was released earlier this month), as well as a short-lived TV series.

**Get it:** You can pick up the 25th Anniversary Edition Blu-ray for under a tenner these days

## GORG

Britain's answer to *Godzilla* has a giant sea monster captured and put on display in a London circus. What nobody realises is that the imprisoned creature is just a baby, and soon its even bigger mother comes looking for her offspring. Cue scenes of a man in a rubber dinosaur suit crashing through replicas of famous London landmarks. And sometimes that's all you need.

**Get it:** US distributor VCI unleashed a restored *Gorgo* on a feature-packed, region-free Blu-ray a couple of years ago



## GRIZZLY

This hairy horror was mauled by critics for stealing ideas from *Jaws*, but still made a mint at the box office. Swapping the beaches of New England for a national park, and a 30ft shark for a 15ft bear, *Grizzly* does feel pretty much like *Jaws*-on-land – right down to the bickering about whether the park should be closed while the angry ursine killer is chomping through campers. Of course, that doesn't mean it's not a fun way to spend a Friday night.

**Get it:** On BD there's a budget French release or a limited edition US platter. Maybe stick to the widely available two-disc R1 DVD



## THE MIST

A mysterious mist filled with deadly creatures descends on a small US town in Frank Darabont's mesmerising bigscreen adaptation of Stephen King's 1980 novella. While some of the digital effects look a little hokey, *The Mist* offers an intelligent, unsettling take on the monster movie and boasts one of the most unforgettable climaxes in the history of horror.

**Get it:** The double-disc UK Blu-ray boasts both colour and black-and-white versions of the film (the latter being Darabont's preferred version), plus plenty of extras



## THEM!

The undisputed king of atomic-age big bug movies, *Them!* features a nest of giant radioactive ants(!) terrorising the New Mexico desert before decamping to Los Angeles' storm drains and sewers. Unlike most of the films it inspired, *Them!* treats its subject matter with enough seriousness and gravity to overcome its silly premise, while still delivering plenty of top-notch B-movie thrills via Oscar-nominated special effects.

**Get it:** *Them!* hits Blu-ray in the US on October 27 as both a standalone disc and as part of a *Special Effects Collection* boxset



## THE VALLEY OF GWANGI

A group of cowboys do battle with dinosaurs (most notably the particularly irascible Allosaurus called Gwangi) in this memorable 1969 genre mash-up. If that premise isn't enough to whet your appetite, the film's collection of prehistoric beasts were brought brilliantly to life by stop-motion pioneer Ray Harryhausen, in what would turn out to be his final dinosaur-themed production.

**Get it:** Currently awaiting release on Blu-ray, this classic is thankfully easy to find on DVD

## CLOVERFIELD

Shrouded in secrecy during production and backed up by mysterious viral marketing tie-ins, some were disappointed when *Cloverfield* turned out to be little more than a cross between *The Blair Witch Project* and *Godzilla*. Yet stripped of all that excess baggage, the film is an exhilarating update of the genre that uses its found footage style to give the otherwise familiar giant monster action a claustrophobic intensity.

**Get it:** Grab the Blu-ray for a room-rattling audio experience



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# Top-storey media room

Twin screens elevate this home office/movie den to another level.  
**Mark Craven** reports



### KIT CHECKLIST

**SAMSUNG:** 55in LED TV  
**EPSON:** EH-TW6100 Full HD LCD projector  
**ONKYO:** TX-NR828 AV receiver  
**IMPACT SCREEN SOLUTIONS:** 101in acoustically transparent projector screen  
**KEF:** 2 x C3 bookshelf speakers; 2 x E301 satellite speakers; 1 x CC6LCR (centre); 1 x T2 subwoofer  
**MARANTZ:** SR5009 AV receiver  
**SONY:** BDP-S5100 Blu-ray player  
**APPLE:** Apple TV  
**SAVANT:** System control  
**RAKO:** Intelligent lighting

**HERE'S A ROOM** that serves many functions. A converted loft space, it works as a home office, a TV/gaming den for the owner's children, and a slick, stylish home cinema. The cost? Less than £10,000 – and that includes all the hardware, plus design, installation and calibration. Handy.

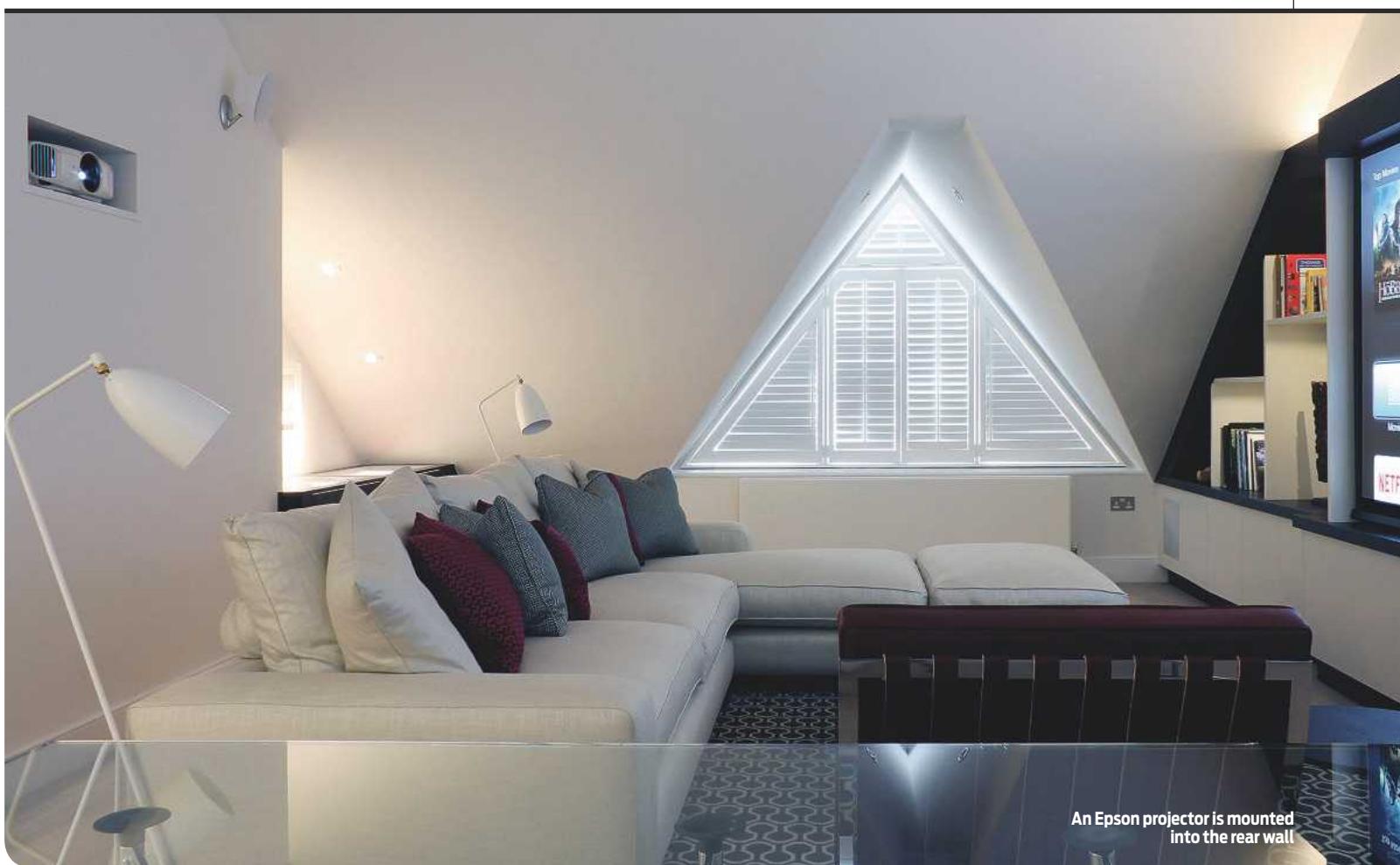
The project was undertaken by North London company H&H Audio Visual. Earlier this Summer, it won the new 'Best Media Room Under £10,000' category at the CEDIA Awards. As befits an authentic media room, attention to detail has been paid to keep kit discrete and operation simple. The owner wanted to be able to switch from daytime office to nighttime cinema at the touch of a button, and that's what he got.

### Twice as nice

There are two displays in the system – a 6 Series 55in Samsung LED flatscreen and a 101in projector screen from Impact Screen Solutions. For bigscreen movie action, the motorised screen descends from its ceiling housing, driven by a 12V trigger and the Savant control system. Even better, operation is synced to the Rako lighting array – as soon as the screen is selected, LED lighting in the room dims automatically, ensuring the best image from the Epson EH-TW6100 projector. >

When the screen is up,  
a Samsung 55in TV  
takes over





Surround sound is delivered by a KEF speaker array. Bookshelf C Series models are housed in the bespoke front-wall cabinet for front/left right duty, with white grilles to match the room's decor. The centre channel is also from the C Series. Mounted below the TV, it becomes hidden from view when the projector screen is down – hence the need for acoustically transparent material. The surround speakers are wall-mounted KEF E301s, with their egg-shaped enclosures providing a neat visual match to the room's freestanding lamps. A vertical-standing T Series subwoofer provides LFE.

#### Attic architecture

Loft spaces typically throw up installation challenges, and this room was no different. The vaulted ceiling and chimney breast, plus the owner's other requirements, limited speaker placement flexibility. This is one reason why the Marantz SR5009 AV receiver, which features Audyssey MultEQ XT room correction, was specified. This 7 x 100W home cinema hub is also ready for 4K sources, should the owner want to upgrade his equipment in the future.

A further reason the installers opted for the



A customised Savant app gives the owner easy control



Marantz's SR5009 packs Audyssey MultEQ XT

Marantz was its tried and tested Savant programming profile – choosing kit with integration in mind, says H&H, cut programming and installation times (the total hours of the build was 26) and kept the project under budget.

And it's this control system that ties the whole room together, even incorporating the office PC as a source (alongside a Sony BD deck and Apple TV).

The final verdict on the system? 'We're really pleased with the cinema room,' says the owner. 'It's easy to use and looks great. It's great to have a clean space to work in during the day and in the evening the whole family can enjoy it.' ■



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# REVIEWS

→ **HARDWARE HIGHLIGHTS** MARANTZ 11.2-channel AV processor SONY Curved 65in 4K TV DALI Zensor Pico 5.1 speaker system ONKYO Dolby Atmos/DTS:X AV receiver CANTON Soundbase aimed at largescreen TVs ARTISON Nano subwoofer PHILIPS 40in Full HD Ambilight TV SKY Second-generation Now TV box ROUNDUP Four mid-range headphones do battle **AND MORE**

## Great British Blu-ray



Cambridge Audio hopes to lure high-end buyers to its audiophile CXU Blu-ray player. We give our verdict on page 54

### HCC RATINGS KEY...

Outstanding	
Above average	
Acceptable	
Disappointing	
Dire	

**Richard Stevenson** finds his movie and music needs satisfied by Marantz's top-flight processor

# Ready for anything

**MARANTZ'S FLAGSHIP AV** processor has just received the A suffix it perhaps always should have. The AV8802A comes to the table boasting HDCP 2.2 – so is compatible with protected 4K content from forthcoming UHD Blu-ray spinners. Bought a non-A model earlier in the year? HDCP 2.2 is also available as an aftermarket upgrade.

Marantz's zapper brandishes a tiny LCD display



So what we have here is a bang-up-to-date 11.2-channel AV preamplifier with Dolby Atmos decoding as standard, Auro-3D already available as an optional firmware upgrade and the promise of a DTS-X upgrade at any minute. Well, any month anyway. This is Marantz's ultimate statement on the art of home cinema, currently taking over Denon's mantle of the big cheese of AV in D&M's portfolio. Ironically, during this audition, Marantz's new marvel replaced a much vaunted – although now long in the tooth – Denon AVP-A1HDA.

Straight out of its enormous cardboard box, the AV8802A settles itself on to my equipment rack with purposeful menace and muscular build quality. It's not got the size, weight or sheer metal content of the outgoing Denon, but let's not forget it's not much more than half of the AVP-A1HDA's original £6,000 price tag either.

Much of the menace comes from its slab-like black fascia, with several different textures going on, and a knob and badge combo that looks like a triple-eyed beastie. I would have preferred Marantz's champagne silver-gold colour to match my other silver kit, but in best Henry Ford tradition the options are black or nowt. That seems a slightly strange move considering Marantz's premium Blu-ray player is also available in a 'fizz' finish. >



The AV8802A brings HDCP 2.2 support to its 8-in, 3-out HDMI stage



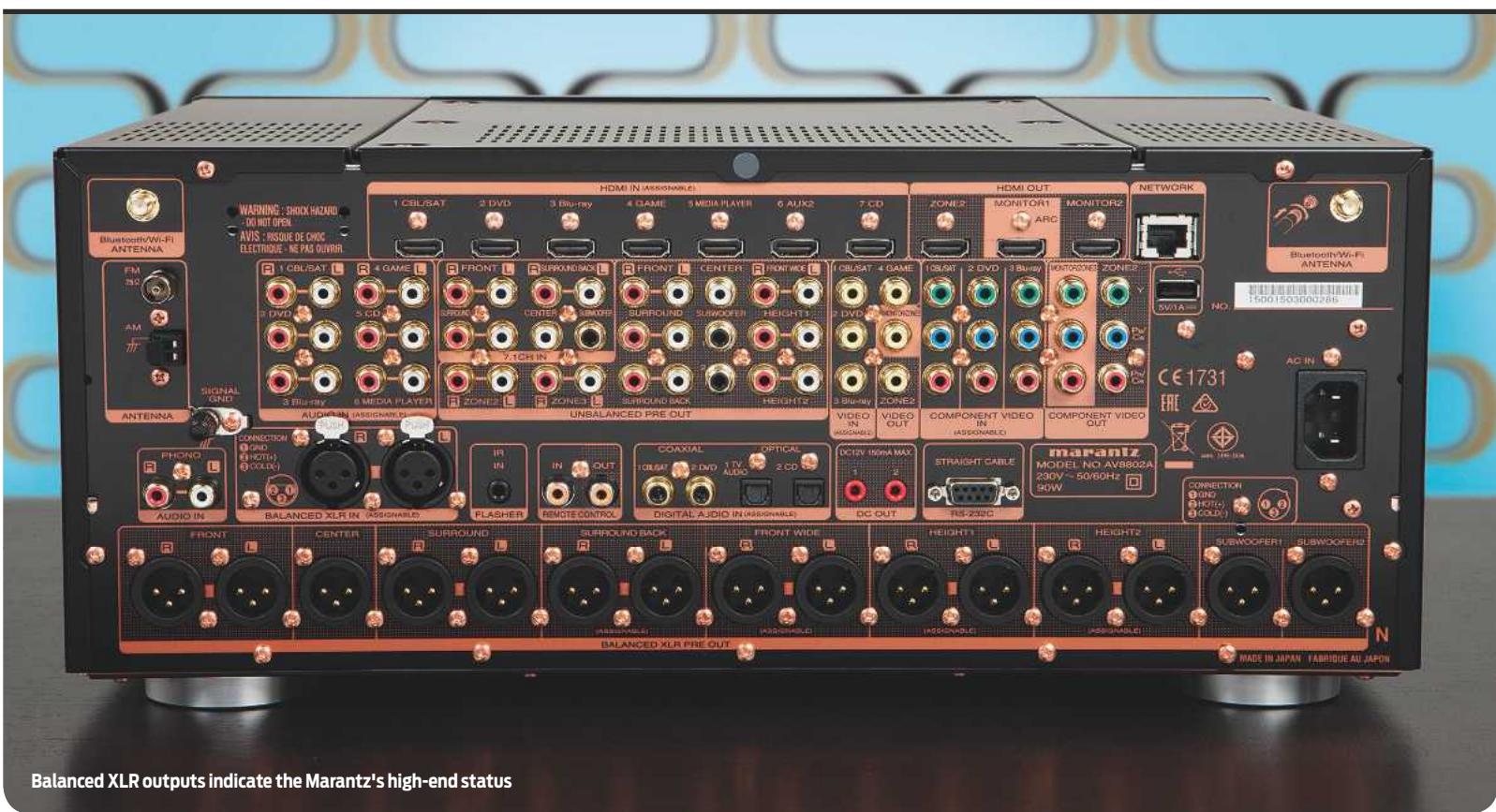
## AV INFO

**PRODUCT:**  
Networked  
11.2-channel  
AV processor

**POSITIONING:**  
The flagship  
model from  
the D&M stable

**PEERS:**  
Onkyo PR-SC5509;  
Arcam AV950;  
Anthem AVM 50v





Balanced XLR outputs indicate the Marantz's high-end status

In typical AV receiver and processor style, a large drop-down flap on the front reveals a number of buttons and ports, and the back panel is packed with connections. Essential for a processor with high-end ambitions is the long row of balanced XLR outputs. Count 'em – there are 15. While this processor will only output 11.2 channels at any one time the additional connections can be user-configured. So, for example, you can have 7.2.4 – with four Dolby Atmos ceiling speakers – and have front height speakers connected and simply switch between the two depending on content.

The HDCP 2.2-compatible HDMI array is eight-in and three-out, with ARC on one of the outputs for direct connection to your television. There is also a raft of component video connections, a 7.1-channel input stage and normal phono connections to your power amplifier(s) should they not have balanced inputs. A hardwired network connection, as well as built-in Wi-Fi and Bluetooth, caters for network audio features including AirPlay and control via Marantz's rather funky app.

Yet the AV8802A is not over-endowed in the digital connection department. While you do get four digital inputs on the back panel, two coaxial/two optical, there are no S/PDIF outputs at all and no USB-B input. This means those wanting to hookup a laptop will almost certainly have to connect to the Marantz wirelessly rather go in directly to its on-board DACs. Moreover, in an era when almost every high-end AV product is network connected, just a single Ethernet port for the 'hub' device in your system might feel a bit mean.

Under the hood the AV8802A is billed to deliver the ultimate in cinematic surround

sound, and Marantz has thrown its best technologies, best engineers and best supporting components at it to ensure it lives up to the hype. From a pure audio perspective it uses Marantz's HDAM (Hyper Dynamic Amplifier Module) technology found on the company's reference series audiophile components. Compared to conventional op amps, HDAMs claim to offer superior noise floor, extreme wideband performance and the ability to match the maximum dynamic range of the highest resolution audio formats. Needless to say this processor handles pretty much any music and AV audio format you care to throw at it, from humble MP3 up to 2.8MHz DSD and everything Dolby and DTS in between.

The video processing section is no slouch. The AV8802A will pass 4K/Ultra HD at 50Hz/60Hz with full 4:4:4 sub-sampling. It can upscale 1080p content to 4K and transcode HD and SD analogue sources too. If that doesn't excite your video imaging juices, then the processor is also certified by the Imaging Science Foundation and sports a gamut of advanced ISFccc video tweaking controls.

#### It's magic time

Setting up and connecting the Marantz is made easier by the colourful GUI setup wizard that guides you through every connection step-by-step. Considering the sheer number of terminals and cable ends one is likely to be juggling, it's useful even if you're an old hand at cooking up processors. For room EQ, you get Audyssey's flagship Platinum Suite with MultEQ XT32, plus Audyssey Installer Pro compatibility on the off chance you have any

spare cash left after buying it to have it professionally installed. I, on the other hand, connected the Marantz to my existing power amp array, Blu-ray player, monitor and projector and set it up myself.

The system uses eight placement measurements to average a soundfield around your listening position, ironing out hotspots so more people can enjoy the show. It's rather time-consuming and is annoyingly hamstrung by a niggle that has existed on Denon and Marantz AV hardware for as long as I can remember. That is, it uses a fixed datum volume level target for each channel of 75dB and it will apply volume cuts to bring every channel down to this level when outputting its fixed-level test tones. As the Audyssey



The AV8802A uses a three-piece top cover for chassis rigidity

system's maximum cut is -12dB, if you have monster power amps, very efficient speakers (90dB/W+) or speakers quite close to the listening position (tick, tick and tick here) then the system will end up cutting all over-loud channels by -12dB – which doesn't balance different speaker efficiencies at all. While you can then go back in and manually adjust each

## 'Natural, immersive and free from added character – this could easily be the reference for cinema sound'

channel using a separate SPL meter, that is hardly 'auto' setup, and I do wonder what potentially negative effect that has on Audyssey's room analysis and filtering. Why can we not be able to adjust the target sound pressure level or at least measure relative to the front main speakers?

### High-fidelity hero

Listening to the Marantz for the first time with something of a cob on about the setup, I really needed to be wowed. And, man, I was wowed. I was wowed enough to want to spend the rest of my life kicking back and enjoying one of the most sophisticated and detailed multichannel sounds that has ever graced my listening room. If Marantz has endeavoured to make a processor where every channel will appeal to a serious hi-fi audiophile, then the company has succeeded. It's rolled up its many decades of heritage and high-fidelity expertise into one rather mean-looking black box.

Having been used to the Denon AVP-A1's penchant for the dramatic and its ability to turn a family comedy into a high-octane ride, the Marantz approaches its task with a wholly different attitude. It is all about the subtle, all about the detail and all about crafting a precision surround sound experience with nothing added and nothing taken away. It's a clichéd phrase, but I reckon this processor gets oh-so-close to how any director would have intended their film to sound. The balance is so natural and immersive, and free from added character, that this could easily be the reference point for home cinema sonics.

With my extensive back catalogue of Blu-ray favourites, letting the Marantz's Dolby Surround mode upscale the 5.1 and 7.1 soundtracks to a 7.2.4 Atmos experience is a complete no-brainer. Unlike processed height and width channels where I constantly turn the effects on or off depending on the movie, I left the AV8802A in audio upscale mode for movies all of the time. It really is sublimely impressive how even content with no original overhead material gains immense height – or,

rather, vertical depth. There is no vagueness to the sound brought about by artificial channel processing – it's clean, crisp and with added height. It's quite amazing.

Switch to Dolby Atmos-encoded content and the sound steps up another notch. *Gravity* on Blu-ray proves simply breathtaking – quite literally. Through the many air-less sequences, and particularly when the lander is filling up with water, I found myself holding my breath. The detailed soundscape of the enclosed space, changing as the water comes in, is captivating and believable. Those 11 channels subtly fool you into thinking you are right there. Even my feet got wet... although I found out that was from spilling the wine.

The Marantz's natural balance is the perfect match for *Gravity*'s thoughtful soundtrack, but could it play hardball too and deliver a supercharged adrenaline rush when required? I cued up *The Expendables 2* to find out – and by the end of the opening sequence I was in fits of laughter at the spectacular dynamic range and lung-crushing bass effects that the AV8802A delivered in spades. Its abilities are not genre- or volume-dependent, they are simply scalable. If anything, *The Expendables 2*, thanks to the Marantz's ability to disentangle a soundtrack, sounded even better than it did on the old Denon. Where the latter would generate a spectacular and impressive wall of sound, the Marantz manages to get deeper into the chaos, revealing effects that I hadn't previously even realised were there.

The overall width, depth and height of the soundstage seems huge. This film's audio is horrifically compressed to the point where voices are as loud as gunfire, and it can feel like you're simply being battered by your own speakers after a while. Yet the Marantz seems to recreate something of the missing dynamic range purely by its ability to highlight each and every component. I was convinced the Denon was going to kick the AV8802A off the kit rack with action fare, but how wrong could I be? Its subtleties and detail massively reduce the fatiguing barrage of noise of some of the more gung-ho movies and play to the strengths of atmospheric actioners like *American Sniper*.

### Making a statement

The AV8802A brings audiophile-quality processing into a multichannel environment and for a relatively reasonable cost. The only other processor I have tested for HCC to achieve this was the Anthem Statement D2V – a few years ago now – at near three times the price. To put my money where my mouth is, I will be buying an AV8802A and consigning my Denon AVP-A1HD to history. And, for the first time ever in my three-decade love affair with home cinema, I'll bin my high-end two-channel preamp as well. It is simply that good with music, too ■

### ON THE MENU



→ Marantz's control app (pictured) is wonderfully uncluttered and a good alternative to using the handset and onscreen GUI. Configuration via a web browser is also an option

### SPECIFICATIONS

#### DOLBY ATMOS: Yes

**DTS:X:** Yes (via future firmware update)

**AURO-3D:** Yes (via paid upgrade)

**MULTICHANNEL INPUT:** Yes. 7.1 channel

**MULTIROOM:** Yes. Zone 2 and 3

**AV INPUTS:** 4 x composite; 4 x digital audio

(2 x optical and 2 x coaxial)

**HDMI:** 8 x inputs; 3 x outputs

**COMPONENT VIDEO:** 3 inputs; 2 x outputs

**VIDEO UPSCALING:** Yes. To 4K

**DIMENSIONS:** 440(w) x 410(d) 185(h)mm

**WEIGHT:** 13.6kg

**ALSO FEATURING:** Audyssey MultEQ XT32 Pro; ISF video calibration; Apple OS and Android control apps; DLNA networking; Ethernet; Wi-Fi; Bluetooth; USB; AirPlay; FM and internet tuner; Spotify Connect; HDCP 2.2; Hyper Dynamic Amplifier Module design; 4K 50/60Hz passthrough and 4:4:4 sub-sampling; 11.2-channel processing; XLR outputs; Pure Direct mode; Compressed Audio Enhancer; DSD, FLAC, WAV and ALAC hi-res audio support; RS232

### HCC VERDICT



#### Marantz AV8802A

→ £3,350 approx → [www.marantz.co.uk](http://www.marantz.co.uk)

→ Tel: +44 2890 279830

**HIGHS:** Sublime natural sound; incredible detail and depth; flexible speaker and format configuration; up-to-date spec

**LOWS:** No USB-B or Ethernet hub; annoying 75dB setup volume; no silver finish

**Performance** ★★★★★

**Design** ★★★★★

**Features** ★★★★★

**Overall** ★★★★★

**46** SONY KD-65S8505C → £2,300 approx

**RUSSIAN ROULETTE**  
We give  
*Avengers: Age of Ultron* a spin  
on Blu, p96



Sony's 65in curved screen offers active 3D playback

**HOME CINEMA**  
Choice  
**RECOMMENDED**



Sony proves to **John Archer** that Samsung isn't the only curved LCD TV game in town

# Apexing the bend

**WHILE SOME LOVE** the look of curved TVs, others worry about the impact curved screens can have on the viewing experience in the form of issues like viewing angles, onscreen reflections and distorted geometry. Cue the Sony KD-65S8505C: a 65in TV that tries to balance curved aesthetics with less controversial picture characteristics by using a markedly shallower curve than rival screens.

Does this gentler approach really make Sony's second-generation curved TV the solution we've all been waiting for, or does it mean the 65S8505C just falls between two stools?

The screen doesn't make as much of a design statement as Sony's debut curved TV, the 65S9005B, and its centrally-mounted desktop stand looks a bit spindly. However, it's undoubtedly still a good-looking TV with its slim and robust black frame, and the silver trim around the bezel adds a welcome hint of shiny opulence.

The use of a slimmer frame than the 65S9005B makes it less of an imposition on your precious living room space too – although it also means the 65S8505C has had to ditch the innovative multi-angle sound system built into its forebear.

The reasonably trim rear houses a solid collection of connections, including four HDMI and three USBs. Sony's set also carries in-built Wi-Fi, Bluetooth and NFC support, with the facility to both stream multimedia content from networked external devices or go online with Sony's latest smart TV system.

This smart engine is dominated by Google's latest Android TV platform – and, as we've said before, it's not entirely successful. Turning to Android certainly gives Sony a leg up when it comes to content (the 4K versions of Amazon Prime and Netflix are both present and correct, for starters) as well as providing enhanced compatibility with other Android devices. However, the interface is cluttered and dictatorial, with little to no potential for customisation. Its Android focus might have die-hard Apple fans running for the hills, too.

Sony is going to be adding YouView functionality to the 65S8505C via an update

at some point – and that's not the only major feature it's set to receive via firmware update either; it will also receive HDR support before the year's out. And we expect some changes to be made to the Android interface to streamline usability.

## X1-rated images

As for picture features already present on the 65S8505C, many of them are powered by Sony's X1 4K-optimised video processing chip. This introduces image optimisation routines for streamed 4K content as well as numerous enhancements for almost every facet of picture quality. For instance, it combines with Sony's wide colour gamut Triluminos technology to deliver a claimed 150 times the colour adjustment range of Sony's 2014 4K TVs. There's also a retooled intelligent noise reduction system capable of adjusting its performance locally to suit different parts of an image.

Upscaling of non-4K content to the TV's native 4K resolution should also benefit from the X1 processor – especially thanks to Sony's new Self-Similarity Super Resolution engine [*sounds like something from a Marvel comic – Ed*], which ensures upscaled thin lines don't put weight on, as they can do during the upscaling process.

For motion, the 65S8505C sports a 1,200Hz-emulating version of Sony's usually impressive MotionFlow engine to clean up judder and blur issues. There are new algorithms to boost black level response and detail reproduction from the screen's edge LED light engine, too; this mid-ranger doesn't pack the direct LED lighting with 'X-Tended Dynamic Range' local dimming system that elevates Sony's X9305/X9405 sets.

## AV INFO

**PRODUCT:**  
4K curved TV  
with Android TV  
smart system

**POSITIONING:**  
High on Sony's range  
list, just below the  
9305/9405 models

**PEERS:**  
Sony 65S9005B;  
Samsung  
UE65JS9000;  
Panasonic  
TX-65CX802

**The One-Flick touchpad remote offers voice control and NFC pairing**



Sony provides a healthy array of picture calibration tools, enabling dedicated tweakers or professional installers to optimise pictures to pretty much any standard, taste or living room environment. You can even tweak the potency of Sony's upscaling system.

Wrapping up the 65S8505C's features is its 3D playback, which uses the active system. You don't get any free 3D glasses, though. Boo.

### Work to be done

Imagery usually appears nothing short of spectacular. However, unlike many of Sony's other recent screens, getting the 65S8505C's pictures looking their best does require some effort. So before I can finish on the high note Sony's curved TV ultimately deserves, let's deal with its flaws first.

For starters, out of the box the TV tends to over-sharpen upscaled content, resulting in some distracting noise at times. I can only surmise that this is down to some kinks in Sony's new local noise reduction system. Dealing with this niggle involves nothing more than ramping down the Resolution element of the TV's Reality Creation suite to around its 30-35 setting.

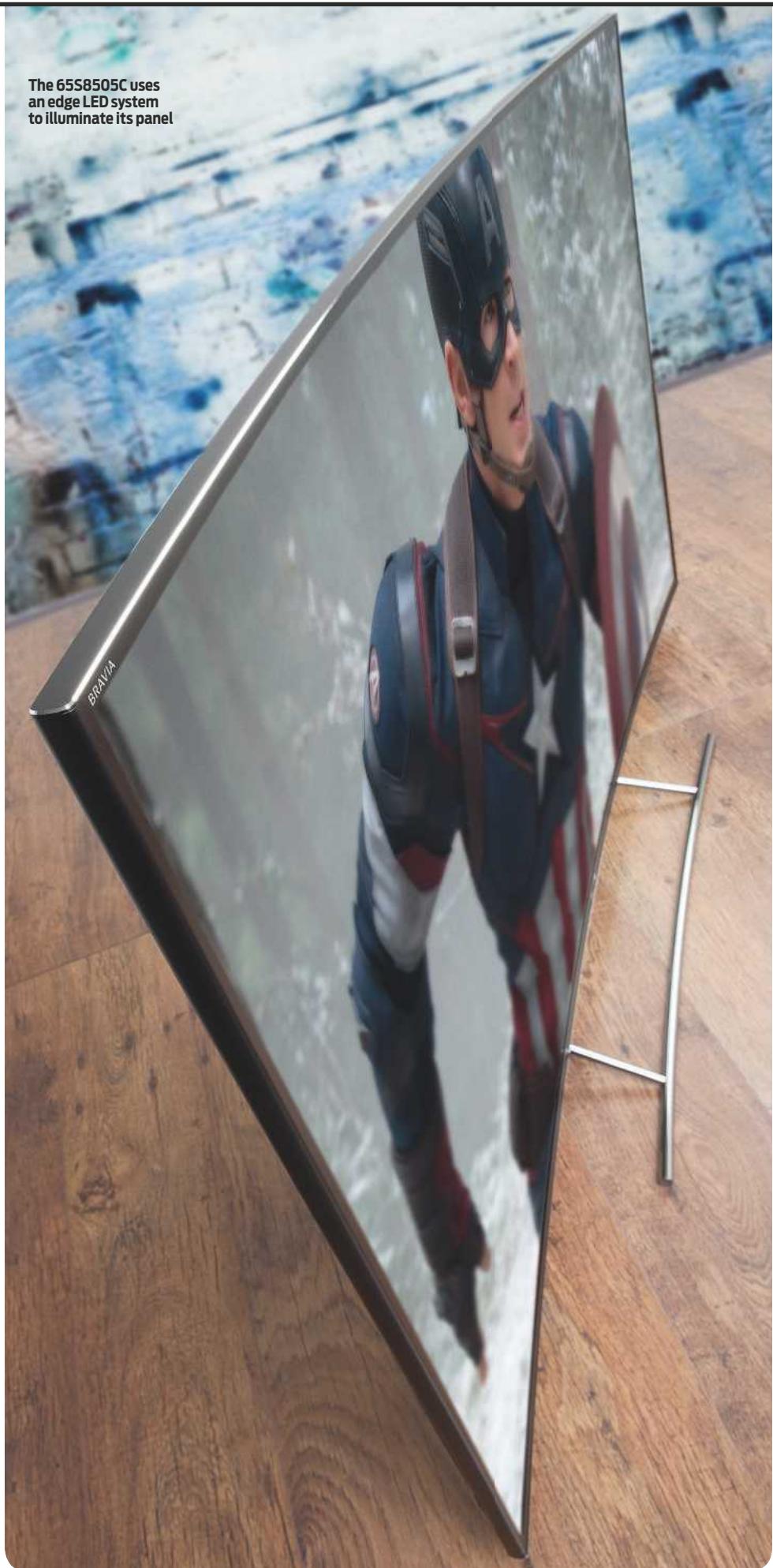
I also found the TV's light sensor default setting prone to taking too much brightness out of images during dark-room viewing. In addition, the dynamic contrast system in use here has a nasty flaring habit. During extremely dark scenes, or following fade-to-blacks, the TV's backlight tends to turn off completely to bolster black response. This means the backlight needs to switch back on again when light re-enters the image. When this happens there's a pronounced and distracting flash from Sony's backlight engine.

This issue can, of course, be removed if you turn off the set's dynamic contrast features. However, this results in contrast taking a significant hit, with greyer-looking black tones and reduced shadow detail. I chose to leave the dynamic contrast tools left on at their weakest power level, since the flaring issue doesn't come up all that often while the reduced black levels witnessed with the contrast tools off affected almost any low-light sequence. Still, the flaring problem remains a strangely clumsy error from Sony given that the brand has previously run demonstrations dissing similar backlight on/off systems in rival TVs...

The 65S8505C's screen is rather reflective of light sources, and the curve can distort these reflections across more of the screen's area than would be the case with a flat TV. It is true, though, that the relatively subdued bend of this 4K bigscreen does reduce the impact of curved screens' negatives (I guess it also reduces the potency of its positives).

Now it's time for the good stuff. Particularly brilliant versus its rivals is colour rendition. The combination of Sony's

**The 65S8505C uses an edge LED system to illuminate its panel**



Triluminos technology and its new processing enables the 65S8505C to render a stellar combination of colours – they're dynamic and rich but also nuanced. It shifts gears effortlessly between the muted grey palette of Jen Yu and Yu Shu's fight in *Crouching Tiger, Hidden Dragon* and the vibrant greens of the treetop fight between Li Mu Bai and Jen Yu, or the subtle oranges and yellows of the film's desert sequences.

No matter what content you feed it, in fact, this screen always makes it look sumptuous.

### Challenging beasts

*Crouching Tiger, Hidden Dragon* was upscaled to the 65S8505C's native 4K resolution from an HD Blu-ray. It's quite a challenging film

'The screen's 4K clarity is bolstered by some excellent motion processing and colour rendition'

to remap thanks to its mixture of stylised and natural lighting, fast motion and occasional grainy moments. And initially its variety did cause the upscaling issues with noise, along the lines discussed earlier. But once I'd reined in the Reality Creation's Resolution setting things went from not great to brilliant; the 65S8505C served up oodles of extra detail and sharpness without much accompanying noise. And it's noticeable that the up-rezzing

engine is effective at calculating and adding colour subtlety to upscaled sources, which contributes to the image's sense of detail and '4Kness'.

That said, this 'Droid TV is inevitably at its very best when fed native 4K. Sequences of *After Earth* and 60p footage from the football World Cup look detailed, crisp and clean, practically slapping 4K naysayers in the face with the obviousness of the step up from regular HD.

Scenes in the desert cave in *Crouching Tiger, Hidden Dragon* reveal that Sony's X1 processing is adept at delivering subtle low-lit details. There's a depth to the image that's still challenging to most of the LCD TV world. Colour tones don't falter in dark areas either, and with the dynamic contrast system active you generally don't have to worry about a grey shroud hanging over the black areas of the image, or backlight clouding.

4K clarity is further bolstered by excellent motion processing. There's only minimal reduction in the image detail during both my native 4K World Cup material and the insanely fast fighting sequences in *Crouching Tiger, Hidden Dragon*.

I'd hoped that the 65S8505C's exceptional 4K detailing might also elevate its 3D experience to a truly immersive level. But the upscaling of pristine 3D Blu-rays like *Avengers: Age Of Ultron* doesn't hit quite the same level of sharpness witnessed with 2D, plus there's a little crosstalk ghosting noise around. My test sample additionally exhibited a strange, hopefully sample-specific purplish infusion over the bottom third or so of its 3D images. Odd.

Without the multi-angle speaker system found in Sony's previous curved set, the soundstage here lacks width and power. However, it still sounds better than many of today's skinny TVs. Sony's speakers deliver enough scale and drive to provide a suitably large-scale accompaniment to the 65in images. There's plenty of subtlety in the set's handling of *Crouching Tiger...*'s surprisingly detailed soundmix, but also a decent amount of bombast with *Age of Ultron*'s cartoonish audio – notwithstanding the fact that bass depth is fairly limited unless you add one of Sony's optional (but certainly worthwhile) wireless subwoofers.

### Welcome to the curved club

The 65S8505C is expensive relative to Sony's similarly-spec'd flat TVs (though its upcoming HDR support softens the price blow), and some clumsiness in its dynamic contrast system and initially over-enthusiastic upscaling undermines its otherwise excellent picture quality. But it really can look amazing for much of the time, and its shallower curve option certainly makes it a worthwhile addition to the curved screen scene ■

Lost the remote?  
There's a power switch  
on the back...



### ON THE MENU



→ As with all of Sony's 2015 smart sets, this TV carries the Android interface. Its icon-layered menus certainly look slick, and movie-on-demand content is rife. Not the most user-friendly system around, though

### SPECIFICATIONS

**3D:** Yes. Active

**4K:** Yes. 3,840 x 2,160

**TUNER:** Yes. Freeview HD

**CONNECTIONS:** 4 x HDMI; 3 x USB; RF input; CI slot; component video input; headphone jack; Scart; Ethernet

**SOUND:** 2 x 10W

**BRIGHTNESS (CLAIMED):** N/A

**CONTRAST RATIO (CLAIMED):** N/A

**DIMENSIONS (OFF STAND):** 1,452(w) x 845(h) x 108(d)mm

**WEIGHT (OFF STAND):** 30.1kg

**FEATURES:** Built-in Wi-Fi; USB multimedia playback; Bluetooth and NFC connectivity; Triluminos colour system; X1 video processing; Android TV smart system; YouView support in-bound; HDR support in-bound

### HCC VERDICT



**Sony KD-65S8505C**

→ £2,300 approx → [www.sony.co.uk](http://www.sony.co.uk)

→ Tel: 0845 6000 124

**HIGHS:** Stellar colour performance; outstanding native 4K and upscaled detail; attractive design; good connectivity

**LOWS:** More expensive than similarly specified flatscreens; occasionally clumsy dynamic contrast; lack of smart TV customisation

**Performance** ★★★★☆

**Design** ★★★★☆

**Features** ★★★★☆

**Overall** ★★★★☆

Danny Phillips – aided by The Incredible Hulk – puts this compact 5.1 speaker array through its paces

# DALI's return to Zensor saves space



The Pico speakers are smaller versions of DALI's original Zensor 1 cabinet



**PICO IS A scaled-down version of DALI's impressive Zensor 1 standmount, cramming the same driver technology into a box that's around 30 per cent smaller. With its dinky dimensions and attractive design, it could be a good bet if you want to squeeze a full 5.1 system into a small or medium-sized living room.**

Two pairs of Picos are used as the front and rear speakers in this 5.1 package, with the matching Zensor Pico Vokal on centre channel duties and the E-9 F subwoofer bulking up the bottom end.

DALI is best known for opulent, distinctive speakers like the stunning Fazon F5 and Epicron 8, but these see the company in a restrained mood. The boxy cabinets and

minimal style flourishes – beyond the silver DALI badge – mean they lack individuality. Still, these aren't ugly speakers – the cabinet is clad in black ash vinyl (it also comes in light walnut and white vinyl) with a gloss-black baffle and silver driver surrounds.

The compact size makes them easy to place, with a bass reflex cabinet that benefits from on- or near-wall placement (there are

keyhole mounting brackets on the back) and which further boosts their viability in cramped rooms.

Build quality is as good as could be expected for the money. The bodywork is robust and hefty, but there are a couple of concessions to the budget price tag – the vinyl veneer is inevitably less fancy than the lacquers found higher up DALI's range, while the removable cloth grille is held on by plug fixings and not magnets.

The Picos use the same driver array as DALI's Zensor 1, namely a 4.5in wood fibre cone mid/bass driver and a 1in soft textile dome tweeter.

At 230mm wide, the Pico Vokal is an unusually-shaped centre speaker with a

#### AV INFO

**PRODUCT:**  
Compact  
5.1-channel speaker  
package

**POSITIONING:**  
DALI's affordable  
entry-level range

**PEERS:**  
Q Acoustics 3000;  
Tannoy HTS-101 XP;  
SVS Prime Satellite





The speakers use DALI's distinctive wood fibre drivers

refreshingly small footprint. It's horizontally configured and styled to match the others, plus uses the same drivers to ensure tonal uniformity – although it doesn't add a second midrange driver like many centre speakers.

DALI's subwoofer of choice is the E-9 F, which isn't designed for this system but fits in well aesthetically. It's a stocky, compact cube with a fetching combination of black ash vinyl and gloss black. On the front is a 9in aluminium woofer, backed by

**'This array is a dab hand with detail, drawing out a movie's sonic minutiae with clarity and ease'**

a magnet system with a four-layer long-stroke voice coil. A down-firing bass port lets you place it against the wall, another bonus if space is tight.

In the engine room is a 170W Class D amp, with a built-in limiter to protect against overloading. On the back you'll find a bunch of controls, including volume, crossover and phase, alongside LFE and line inputs.

#### Hulk smash!

This 5.1 system may be small in stature but delivers a big soundstage. I played *The Incredible Hulk* on Blu-ray (DTS-HD Master Audio 5.1) and there's no shortage of scale and dynamics as Hulk takes on Abomination in the movie's raucous climax. Jeeps and cars are hurled down the Harlem streets with a deep rumble, and explosions feel deliciously visceral. When the two behemoths thunder towards each other at high speed, their footsteps are tight and punchy thanks to the subwoofer's agility.

However, the sub does a lot of the system's heavy lifting. The other speakers don't

contribute much deep bass of their own, borne out by a claimed low frequency response of 62Hz – above the region where much of a movie soundtrack's rumble is typically located. This isn't unusual for a sub/sat array, but I found the potent E-9 F could easily overpower the other speakers and proved difficult to integrate. Frequent adjustment was required to find a satisfying balance, and I only found it with the level near minimum. Placing the Picos a few centimetres from the rear wall also helps matters.

That aside, there's much to admire about the system's performance. The Picos have a smooth, easy tone and a wonderful sense of refinement – the soaring strings as Banner falls from the helicopter sound rich and silky. Push the volume up high and they demonstrate remarkable composure, ensuring that mids and highs remain even and well-rounded.

The array is also a dab hand with detail, easily drawing out the movie's sonic minutiae. Even in the midst of Hulk and Abomination's smackdown, you can hear the lively fizz of snapped electrical wires and the tinkle of shattered car windows. The clarity and openness of the Pico's soundstage is stunning.

Such refinement doesn't come at the expense of attack or impact. Indeed, when Hulk starts clobbering Abomination using two halves of a car as makeshift boxing gloves, the clatter of metal is fierce and purposeful without making you wince.

There's a wide, immersive soundstage on show here, with accurately placed effects enhanced by fluid movement between speakers. This is particularly impressive across the front L/C/R soundstage, with the Pico pair forming a solid and cohesive alliance with the Vokal centre.

That said, dialogue reproduction could be better. Speech is easy to follow and William Hurt's lines are laced with gruff detail, but voices lack the full-bodied 'in-the-room' authority you get from larger centres.

#### Refined option

DALI's Pico 5.1 system has much to recommend it, not least its compact, living room-friendly looks and refined sound quality (which sounds particularly good with two-channel music, actually – the sassy jazz-funk of Dave Grusin's *Modaji* really sparkles). It ekes out tons of detail from movie soundtracks and the fantastic E-9 F subwoofer delivers depth and scale in spades. However, the latter can overwhelm the other speakers without judicious tweaking.

It's an enjoyable listen, then, but this is a very crowded market and there are more cohesive compact 5.1 systems out there with better-matched subs – including the likes of Tannoy's HTS-101 XP and Mission's cube-designed M3. Grab an audition ■

#### SPECIFICATIONS

**PICO/PICO VOKAL**  
**DRIVE UNITS:** 1x 1in soft textile dome tweeter; 1x 4.5in wood fibre cone mid/bass driver  
**ENCLOSURE:** Bass reflex  
**FREQUENCY RESPONSE:** 62Hz–26kHz  
**SENSITIVITY:** 84dB  
**POWER HANDLING:** 40W–125W  
**DIMENSIONS:** 230(w) x 141(h) x 196(d)mm  
**WEIGHT:** 3.1kg

**E-9 F SUBWOOFER**  
**DRIVE UNITS:** 1x 9in long-stroke aluminium driver  
**ENCLOSURE:** Bass reflex  
**FREQUENCY RESPONSE:** 37Hz–200Hz  
**ON BOARD POWER:** 170W  
**REMOTE CONTROL:** No  
**DIMENSIONS:** 288(w) x 307(h) x 311(d)mm  
**WEIGHT:** 11kg  
**CONNECTIONS:** LFE input; phono line-level input

#### HCC VERDICT



**DALI Zensor Pico 5.1**

→ £780 approx → [www.dali-speakers.com](http://www.dali-speakers.com)

→ Tel: +45 96 72 11 55

**HIGHS:** Refined sonic character; lots of detail; terrific two-channel music performance; solid build and fetching design; compact cabinets  
**LOWS:** Subwoofer tricky to integrate; dialogue lacks authority

**Performance** ★★★★☆

**Design** ★★★★☆

**Features** ★★★★☆

**Overall** ★★★★☆

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Cambridge Audio punts Blu-ray with the right degree of pomp and attention to sonic detail, says **Steve May**

# Audiophile player for Anglophones

**WITH ITS UNION flag branding and prim brushed fascia** there's something of the Last Night of the Proms about Cambridge Audio's top-ranking CXU Blu-ray player. The Great British Sound branding reflects the company's UK research and design operation, but is indicative of a lofty approach to audio that explains why you won't see much change out of a grand.

The deck is substantial, and connectivity almost preposterously generous. On the rear panel are two HDMI outputs, enabling you to feed a flatpanel and a PJ simultaneously (or nominating one HDMI for audio-only duties), plus an HDMI input. This switching facility will prove useful if you're running out of ingress on AV receiver or display. Typically you might route a set-top box tuner through here, or



The floating design is shared across all Cambridge Audio's CX components

connect an OTT streamer on a stick, such as Amazon Fire.

There's network Ethernet and two rear-placed USB inputs, plus a composite video output (purely for diagnostic purposes). In addition to optical and digital audio outputs, plus stereo analogue audio out, there's optical and coaxial digital audio inputs, plus full 7.1 analogue audio outputs. IR and RS232 are provided for custom install system control.

On the front panel you'll find an additional USB plus another HDMI with Mobile High-definition Link (MHL) support for smartphones. The bundled IR wand is an old-school button fest, but hefty enough to damage toes if carelessly dropped.

One of the more unusual legends on the front panel is that of Darbee Visual Presence; indicating additional proprietary post-processing is available should you feel the need. Darbee is only applied to the primary HDMI 1 output. Both HDMI outs have ARC compatibility, though.

While Wi-Fi isn't integrated, the deck does ship with a Wi-Fi dongle which plugs into one of the USB slots.

The CXU pulls rank on Cambridge's well-specified 752BD and is once again built on the MediaTek platform, widely regarded as

the go-to solution for affordable (sic) high-performance Blu-ray by manufacturers. Also used by Oppo and Arcam, it supports a wide variety of disc formats, including Super Audio CD, DVD-Audio, AVCHD and HDCD (of which I have just one disc, a rootin' tootin' compilation of Western movie themes).

## 'In general use, this disc player skates like Tony Hawk – the user interface is fast and responsive'

Beneath the lid are five separate Wolfson WM8740 DACs, the same used in much of the CX range, including the CXA stereo amps and CXN network media player (although not the brand's CX AVRs). Cambridge Audio's proprietary ATF audio technology is used to up-sample all audio to 24-bit/192kHz. The video output can scale to 2160p, or any selected resolution beneath that depending on the source. For highest musicality, there's a Pure Audio mode, which takes video processing out of harm's way.

### Speed demon

In general use, the player skates like Tony Hawk. The UI is fast and responsive. Hit the Network menu and the deck immediately identifies DLNA devices, PCs and media servers. Don't expect to find much in the way of streaming entertainment on board, though. There is currently no network service support of note, outside of a YouTube app and Flickr. Video file compatibility is also a little shonky, with playback from my network NAS proving a crap shoot. Some MKVs which unspool happily on rival players simply didn't work, triggering a Resolution Error on the display. There is subtitle support, though, which should please anime fans.

Audio file support is more reliable. My ratbag collection of downloads and rips largely played without incident, from MP3 and FLACs to DSD64/2.8224. However it does not play DSD128/5.6448 MHz files, although it will party with 5.1 DSD64.

Image quality is sumptuous. Clean fine detail, velvety gradations, no intrusive noise or artefacts... Blu-rays look superb. Personally I wouldn't use the internal 2160p upscaler. If your display is from one of the main four, I'd opt to leave processing to the panel. Alternatively, if you're running with a Full HD >



### AV INFO

**PRODUCT:**  
Universal disc player

**POSITIONING:**  
Part of the  
Cambridge Audio  
CX range of  
components

**PEERS:**  
Oppo BDP-105D;  
Arcam UDP411



display, then this will eke out pop that you probably didn't even know your discs had.

The Darbee video processing implementation is the same as that seen on other devices including the Darbee standalone processor. You get to select your Mode (Hi-Def, Gaming, Full Pop) as well as adjust the level. While I remain a tad conflicted about the benefits of Darbee, it clearly does impact the image, and often without obvious compromise. When Iron Man dons the Hulkbuster suit (*Avengers: Age of Ultron*, Blu-ray), Darbee demonstrably brings greater contrast and vibrancy to his armour. Full Pop defaults processing at 90 per cent, bringing out detail and ramping up the palette so that reds really zing. Think of it as a TV's Dynamic mode on best behaviour; it's particularly effective with animation. The Gaming mode drops processing down to 60 per cent; the over-emphasised highlights calming a little.

The default Hi-Def mode is set at 31 per cent. This is actually quite subtle, but still powerful enough to crisp armour detailing found on the Hulkbuster. When Iron Man drops the deranged Hulk through the tower, the sequence offers astonishing definition and vibrancy.

Some might question the sense of buying a high-end BD player with 4K Blu-ray tantalisingly close. But this is a high-end music

player as much as a top-flight video machine, and while MediaTek has committed to offering 4K Blu-ray solutions with support for Dolby Vision HDR, there's no indication that 4K BD will be able to offer anything comparable at this price point when the format eventually comes to market.

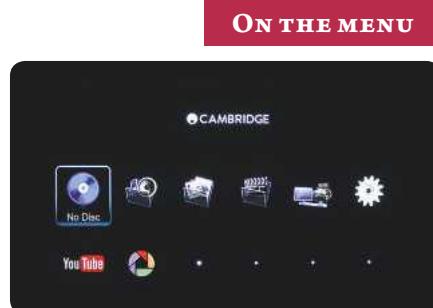
And it's with audio that this CXU really shines. Support for DVD-Audio may be rare, but the player sounds sensational with multichannel DVD-A. I've managed to acquire quite a selection of high-res disc curiosities, which this deck played with panache. A Japanese DVD-A of quasi-classical orchestral tracks, ostensibly entitled *Tokachino* (which fittingly seems to relate to Japanese cheese) and composed by Jun-Ichi Kamiyama, proves a 5.1 96kHz/24-bit treat for easy-listening lounge lizards.

Generally, users should opt to lace up and listen to stereo from the CXU via its analogue output, but it's got to be said the HDMI delivery of multichannel PCM is superb. The DVD-A soundtrack release for *Akira* (Symphonic Suite 2002) is a good deal more avant garde, and is delivered with a level of multichannel excitement that few other soundtracks can match. The energetic 4.1 96kHz/24-bit mix sounds nothing less than extraordinary.

High res audio downloads also sound sublime. Joe Stilgoe's *Almost Like Being In Love* (24-bit 192kHz, Linn Records), is gloriously light and frothy, with clinical clarity and image placement; the live jazz club atmosphere created by this recording is terrific.

### Welcome to the elite

The CXU is a welcome addition to the select band of elite disc spinners currently available. It competes strongly against the Oppo BDP-105D, which also has Darbee onboard, and the Arcam UDP411, which doesn't. It doesn't dethrone the Pioneer LX88 as my favourite high-end BD player, but that player is somewhat more expensive. While the CXU has some minor niggles, in terms of all-round sonic performance it's a corker. If you're partnering with other CX kit, it's a no-brainer ■



→ The CXU's homescreen features hi-res icons for Setup, Network, Movie, Photo, Music and Blu-ray discs, plus the YouTube and Picasa portals. Hit Setup and there are plenty of tweaks, particularly on the audio front – you can configure your speaker layout, select crossover and so on

### SPECIFICATIONS

**3D:** Yes

**UPSCALING:** Yes. To 4K

**MULTIREGION:** No. Region B BD/R2 DVD

**HDMI:** 2 x outputs; 2 x inputs

**COMPONENT:** No

**MULTICHANNEL ANALOGUE:** Yes. 7.1 multichannel, plus stereo

**DIGITAL AUDIO:** Yes. Optical/coaxial outputs plus optical/coaxial inputs

**ETHERNET:** Yes

**BUILT IN WI-FI:** Yes. Via supplied Wi-Fi dongle

**SACD/DVD-A:** Yes/Yes

**DOLBY TRUEHD/DTS-HD DECODING:** Yes/Yes

**DOLBY ATMOS/TRUEHD/DTS-HD BITSTREAM:** Yes/Yes/Yes

**DIMENSIONS:** 430(w) x 82(h) x 312(d)mm

**WEIGHT:** 5kg

**FEATURES:** 3 x USB ports; Darbee Visual Presence picture processing modes; RS232 control; YouTube; Flickr; DLNA media playback with support for MPEG, MKV, MP3, WAV, AAC, AIFF, FLAC, DSD; ATF audio upsampling; Pure Audio mode; Wolfson WM8740 24-bit/192kHz DACs

### HCC VERDICT



**Cambridge Audio CXU**

→ £900 approx → www.cambridgeaudio.co.uk  
→ Tel: 0333 900 0093 (Richer Sounds)

**HIGHS:** Universal disc support; fabulous stereo audio playback; Darbee Visual Presence processing option; excellent video performance

**LOWS:** Limited connected streaming service support; unpredictable video file playback

**Performance** ★★★★★

**Design** ★★★★★

**Features** ★★★★★

**Overall** ★★★★★



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Onkyo has jettisoned its cookie-cutter AVR design for a new look. **Steve May** gets immersed

# Minimalist AV animal

**ONKYO'S TX-RZ800 MARKS** a break from the brand's typical AVR design, offering an oversized volume dial and a pimple rash of tiny buttons. As a fashion statement, it must be said it's not particularly pretty, but it is at least different. Other changes are less obvious.

The RZ800 is a seven-channel design, which allows for either a conventional 7.1 layout (with side and rear back surrounds), or a 5.1.2 Dolby Atmos configuration (that's to say two Atmos height channels). Which option is best largely depends on taste – and your listening room size.

In smaller rooms, and if you have Dolby-enabled speakers to hand, the Atmos layout will probably be the most rewarding option. Perhaps controversially, I'd opt for a 7.1 install in a larger viewing room, to better create a genuine 360-degree sonic wraparound. I suggest this because 5.1.4 (four Atmos speakers) is really required to make an appreciable impact in a larger environment. It's worth noting that all Dolby Atmos Blu-rays fold down to TrueHD 7.1 when no height channels are utilised.

Significantly, the TX-RZ800 is also firmware updateable to DTS:X, the second object-based audio format announced. At the time of this review DTS:X was not available, but the idea is that it'll adapt to whatever speaker layout you choose. If you don't opt to utilise any height or rear back speakers, you can always bi-amp your main stereo pair.

This receiver's spec is on the right side of fierce. Onkyo was the first AVR manufacturer to implement HDCP 2.2 copy protection on its HDMI board, so you would expect to find extensive support here. The receiver has seven rear-placed HDMI inputs, of which five >

Another refreshingly straightforward zapper from Onkyo



## AV INFO

**PRODUCT:**  
Upper mid-range  
7.1-channel receiver

**POSITIONING:**  
Below Onkyo's  
TX-RZ900

**PEERS:**  
Pioneer VSX-1130;  
Denon AVR-X3200W



The TX-RZ800 showcases a new Onkyo AVR design



Five of the amp's HDMI inputs support HDCP 2.2

support HDCP 2.2. These are also compatible with 4K/60Hz and 4:4:4 colour space, which is as good as any source you're going to enjoy for the foreseeable future. In a sign of the times, one of the inputs is labelled Strm Box – somewhere to jack in your Now TV box.

Passthrough is available. In Standby, the last connected source routes through directly to your display, so you don't need to power up the home Odeon just so the kids can catch up with Peppa Pig. Beneath the front drawbridge, there's also a front-facing HDMI for mobile device or game console hook-up.

There are two HDMI outs. You can run two displays simultaneously, or in a main/second zone configuration. Zone 2 is supported with digital audio; analogue stereo goes to Zone 3.

Additional rear-side connectivity includes a USB port and the usual legacy input fest; there's also 7.1 analogue pre-out. All composite and component video sources can be delivered via HDMI. Reborn vinyl enthusiast? No worries, you're covered too.

The receiver has integrated Wi-Fi, Bluetooth and AirPlay support. Network services include Deezer, TuneIn radio and Spotify Connect. Rather than employ one of the big-name DACs, the RZ800 utilises a local (to Osaka) Asahi Kasei 384kHz/32-bit job which covers all eight channels.

### Complexity made simple

One ongoing criticism of AVRs is their wilful complexity. This usually manifests itself in

obstreperous menus, and I reckon it's a key reason why many buyers have migrated from receiver to soundbar. Thankfully, that's not the case here. Onkyo has done a fine job making such a complex beast usable. Configuring inputs can often result in a gnashing of teeth if you want to do anything other than route HDMI, but here things fall into place with simple logic. Granted, it's not the most graphical of environments, but the UI is sharp and responsive.

Build quality and design are typically high. Beneath the lid are segregated power and processing blocks, along with a high current transformer which accounts for much of its 17kg weight. New RZ trappings aside, there's also much that's familiar here; all the usual Onkyo rocket science is in play – Vector Linear Shaping Technology to reduce pulse noise, WRAT (Wide Range Amplifier Technology) non-phase shifted amplification, and so on. However, and this is the key point, the TX-RZ800 doesn't actually sound like a stock Onkyo amp.

Having dropped Audyssey some time back, Onkyo now uses its own AccuEQ room/system calibration. This can have a big impact on the sound. Generally, I think AccuEQ is a solid way to get the receiver dialled in. Out of the box, our TX-RZ800 grunted like someone had punched it square on the nose, but following a quick microphone auto-calibration it was sounding a lot more erudite.

Additional tweaks are optional, but probably necessary. The RZ800 allows you to levy adjustments on all but the main stereo pair, leaving them full band. Alternatively you can just deploy auto-adjustments across the board.



Front buttons cater for input selection

In many ways, the receiver is an exciting listen. When the Sentinels first attack in *X-Men: Days of Future Past*, mutants run, slide and transport around the 7.1 soundstage with heroic zeal; ice splinters, fire crackles, things break – the density of the soundfield is engulfing.

There's no shortage of brawn available. Rated at 185W per channel, the RZ800 has the muscle to dominate all but the most oversized home cinemas. It thumps like Brock Lesnar. *Jupiter Ascending* (Dolby Atmos) exhibits cute sound design even when there's not much going on. The waiting room in the Woman's Health and Fertility centre (Chapter 3) places Foley front and back with delicious precision, before Channing Tatum arrives to dispense alien doctors in a maelstrom of noise. This is fun stuff.

But there are caveats that become more obvious the longer you scoff popcorn. The opening bombing raid to *Unbroken* (Dolby Atmos) is a terrific test of bone-rattling dynamics and multichannel steering. The movie opens with American bombers hoving into view, slowly droning in over a choral opening which floats front to back. Miscellaneous rattles fill every corner of the soundstage, and then the floor drops out of the room as the bay doors open. But when the flak flies, the RZ800 just doesn't muster the dynamics to really startle.

The receiver certainly tracks hard and fast. As Japanese Zeros flash past, you can almost smell the aviation fuel. But there's also the

**'X-Men...'s audio is engulfing – mutants run and slide around the 7.1 soundstage with heroic zeal'**

hint of a hard metallic edge, a reoccurring trait of its sonic character. It quickly becomes clear that encouraging this receiver above 85dB SPL isn't necessarily a good thing.

The UK release of the Metallica concept concert movie *Through The Never* features a 5.1 DTS-HD MA soundtrack of enormous energy; a 24-bit thunderstorm of guitar riffs and concussive bass lines. Again, while the RZ800 is up for the challenge, at least in terms of bludgeoning volume, it does rather lose the band in the moshpit.

The opening to *Fast and Furious 6*, with its coastal car chase, is all about screaming transients. The stick shifting should feel visceral, thrilling. The TX-RZ800 drives hard, but doesn't quite hit pole position.

#### Sibling rivalry

It's tempting to wonder just how different its RZ stablemate is. The step-up (£1,350)

TX-RZ900 lavishes 15W more per channel, has parallel push-pull amp circuit topology on the front channels, and uses a toroidal transformer. By way of contrast, the RZ800 employs an EI type. Generally speaking, toroidal would always be my preferred transformer option in a PCB (Printed Circuit Board)-packed AVR, not least because it's far less magnetically noisy. There are audiophile advocates for EI transformers, but they tend to eulogise esoteric two-channel amps, rather than reasonably affordable multichannel models. Quite whether the TX-RZ800 falls between two stools – neither cheap nor expensive enough – remains to be seen.

Traditional home cinema fans will feel right at home here, though. The receiver is THX Select2 Plus certified and comes with an extensive selection of THX post-processing modes. It also brandishes paperwork proclaiming THX Certified Amp Quality, which is a new one on me. I still rather like the warmth of THX Cinema, but find it more useful for broadcast services rather than Blu-ray soundtracks. There are additional post-processing modes offered, but I wouldn't recommend anything other than a cursory fiddle. There's also a Pure Audio mode that shuts down the display. Beyond that I struggled to discern any impact.

The RZ800 is at its very best with high-resolution two-channel sources. The extra dynamics that 24-bit sampling offers injects air and spatial width. File support is excellent. In addition to the usual codecs (MP3, WMA, WAV), there's compatibility with DSD 2.8 and 5.6 (the latter something even Marantz's high-end AV8802A processor – see p42 – eschews) plus FLAC 192kHz/24-bit content. It's fun with multichannel music, too. Enrique Iglesias' Dolby Atmos mix of *Bailando* does everything it should, bopping in the round with a lovely, wide multi-tracked chorus. Like me, it may be bereft of the ultimate sexiness the dance track deserves, but you'll still gleefully tap your toes.

#### An acquired taste?

Overall, the TX-RZ800 is not your typical 'stonkyo' multichannel amp. There's a hardness to its presentation which takes a little bit of getting used to. It doesn't deliver the slamming transients which set really exciting home theatre amps apart from the rest, either. But let's not sound overly negative. These reservations have to be tempered by the cost of the big box, and whatever way you cut it, the TX-RZ800 looks pretty decent value.

It sounds delectable with high-res audio sources – although prefers unplugged to unleashed – and with DTS:X compatibility to complement Dolby Atmos promised, plus wide HDCP 2.2 HDMI input support, it's not going to date any time soon. Give it a listen ■

#### ON THE MENU



→ Onkyo's user interface is sharp, responsive and works hard to make installation and setup straightforward

#### SPECIFICATIONS

**DOLBY ATMOS:** Yes

**DTS:X:** Yes, via future firmware upgrade

**MULTICHANNEL INPUT:** No

**MULTICHANNEL OUTPUT:** 7.1

**POWER OUTPUT (CLAIMED):** 7 x 185W (into 6 ohms)

**MULTIROOM:** Yes, Zone 2, Zone 3

**AV INPUTS:** 3 x composite; 5 x digital audio (3 x optical and 2 x coaxial)

**HDMI:** Yes, 8 x inputs; 2 x outputs

**VIDEO UPSCALING:** Yes, To 4K

**COMPONENT VIDEO:** 2 x inputs; 1 x output

**DIMENSIONS:** 435(w) x 202(d) x 434(h)mm

**WEIGHT:** 17kg

**ALSO FEATURING:** THX Select2 Plus post-processing; THX Certified Amp Quality; AccuEQ room EQ; Ethernet; Wi-Fi; USB; AirPlay; Bluetooth; Spotify Connect; internet radio; HDCP 2.2 with 4K/60Hz and 4:4:4 colour space; 384kHz/32-bit DAC; extensive file support (MP3, WMA, WMA Lossless, FLAC, WAV, Ogg Vorbis, AAC, Apple Lossless, DSD 2.8/5.6MHz)

#### HCC VERDICT



**Onkyo TX-RZ800**

→ £1,050 approx → [www.uk.onkyo.com](http://www.uk.onkyo.com)

→ Tel: 08712 001996

**HIGHS:** Plenty of HDCP 2.2 HDMI inputs; sprightly multichannel delivery; Dolby Atmos and DTS:X compatibility; ease of use and setup

**LOWS:** Not massively dynamic; can sound overly hard and lacks finesse; boxy styling

**Performance** ★★★★☆

**Design** ★★★★☆

**Features** ★★★★☆

**Overall** ★★★★☆

Canton has strengthened its soundbase lineup with a newer, larger model that suits **Adrian Justins'** audio ambitions

# Canton's wideboy

**ALL SOUNDBASES PRETEND** they're ready for the task of doubling up as a plinth for your flatscreen TV, yet some tend to be quite narrow, making them inelegant – and sometimes impractical – partners for larger-sized screens. The introduction of Canton's lengthy DM100 is therefore a welcome move.

This successor to the previously released (and well-reviewed) DM50 and DM75 models is 1m wide and 33cm deep. This makes it well-suited to screens of 46in and above. In fact, my Samsung UE46F8000 TV looks perfect on it, with the curved stand reflecting slightly in the Canton's gorgeous black glass top (it's also available in silver). You can, of course, use the DM100 with a 55in or even 65in screen. Note that it's rated to accommodate loads of up to 40kg.

Canton's DM100 isn't just a larger version of the more junior models with more drivers – two tweeters, four midrange and four bass drivers – and more power (200W). It introduces several new features, including a Voice sound setting to boost dialogue clarity, automatic selection of Bluetooth input, and an IR delete function for the removal of unwanted remote control commands.

Legacy features include the 2.1-channel output, adjustable lip sync, dynamic range

control, compatibility with most TV remote controls and the same roster of sockets: one each of stereo phono, optical and coaxial inputs. So no HDMI, and while those digital inputs can handle Dolby Digital, DTS isn't supported. For the simplest hookup, use your TV as a hub, feeding the DM100 via optical.

For operation, the Canton provides no onscreen display, just a three-character LED hidden behind the grille. This isn't exactly ideal because most of the time you just get a brief indication confirming a change in source, etc, plus a single light to indicate standby or full power.

The candy bar-sized remote control is nicely weighted and has good, rubberised buttons that respond well when pressed. It's not backlit, though, and you're required to scroll through inputs. Still, at least you can tweak the

## AV INFO

**PRODUCT:**  
Soundbase for  
largescreen TVs

**POSITIONING:**  
Canton's top dog  
in its DM series

**PEERS:**  
Sony HT-XT3;  
Philips Fidelio XS1;  
Canton DM75



Within the DM100's chassis sit 10 separate drivers



volume easily enough and make quick adjustments to the bass and treble.

### Music maestro

Kicking off with some music streaming, the DM100's apt-X Bluetooth mode proves highly adept at serving up an impressively wide dynamic range. The ridiculously deep bass in *L\$D* by A\$AP Rocky causes some reverberation and the bass in Martin Garrix's *Animals* isn't buttery smooth but does have terrific kick. With James Bay's *Hold Back The River*, imaging is a bit narrow (despite the soundbase's considerable width) yet the soundfield is wonderfully coherent; the raspy vocals and snare drum don't project too far forward in the mix. Fully-orchestrated classical music shows off the DM100's talent for detail retrieval and its ability to go loud, with a hi-res download of Mozart's *Violin Concerto No. 4 in D Major* sounding highly polished and balanced through the registers.

The 'base really gets going with TV dramas and movie soundtracks. *Bored to Death* (Sky Atlantic) shows its panache with subtle effects, such as when Jonathan cocks a gun, slams a door, sprints and slides on a gravelly pavement. Dialogue is excellent, courtesy of a robust mid-range, and everything again sounds nicely balanced.

Things get even better with Blu-rays. Via the DM100, *The Expendables 3* becomes an absolute assault on the senses with guns firing, bullets pinging, bells ringing, helicopter

blades whirring, train carriages rattling and more. The soundbase presents this sonic storm with assurance and clarity, so that you're aware of each effect without feeling overwhelmed. Consequently you feel fully engaged with the movie.

As with streamed music, the bass can be a bit unruly at times – when Sly Stallone remotely blows up his own helicopter I hoped for a smooth LF tidal wave washing over me, but got something less distinct – and even the dedicated Voice mode doesn't reach down far enough to give any extra clarity to Sly's ultra-low oscillations.

*Fantastic Mr Fox*'s soundtrack, which is less extreme, is a sheer delight. Dialogue is spot on and soundtrack details – a throaty car exhaust, a ticking watch, a strummed guitar – are an exquisite pleasure to hear. The DM100 does utter justice to the carefully crafted mix.

### Worthy rival

So Canton's wideboy soundbase is highly impressive. It makes a worthy rival to Philips' £450 pancake-flat Fidelio XS1, which offers HDMI connectivity and a separate subwoofer (which could be a double-edge sword), but measures only 70cm wide. To find another soundbase with this much top-plate real estate you would need to consider Focal's Dimension, which is nearly twice as expensive.

Easy to use and sounding as good as it looks, the excellent DM100 proves that Canton is still setting the soundbase agenda ■

### SPECIFICATIONS

**DRIVE UNITS:** 2 x 0.75in tweeters; 4 x 2in midrange drivers; 4 x 4in bass drivers

**AMPLIFICATION:** 200W

**CONNECTIONS:** 1 x optical audio input; 1 x coaxial audio input; analogue stereo phono inputs; subwoofer output

**DOLBY TRUEHD/DTS-HD MA:** No/No

**SEPARATE SUB:** No

**REMOTE CONTROL:** Yes

**DIMENSIONS:** 1,000(w) x 69(h) x 330(d)mm

**WEIGHT:** 12.1kg

**FEATURES:** apt-X Bluetooth; adjustable lip-sync; DTS TruSurround; Dolby Digital; can be controlled from existing TV remote control; Voice sound setting to boost dialogue clarity; Eco mode; IR delete function



### HCC VERDICT

#### Canton DM100

→ £530 approx → [www.cantondm.co.uk](http://www.cantondm.co.uk)

**HIGHS:** Wide enough for larger screens; straightforward to use; accomplished, engaging performance

**LOWS:** Bass can lack control; remote not backlit

**Performance** ★★★★★

**Design** ★★★★★

**Features** ★★★★★

**Overall** ★★★★★



# Flying the Full HD flag

If Ultra HD isn't on your shopping list or you're on the hunt for a second-room screen, **John Archer** suggests you investigate Philips' latest 40in 1080p TV

## AV INFO

**PRODUCT:**  
40in Full HD TV  
with Android  
operating system

**POSITION:**  
The best-specified  
40in TV in Philips'  
latest HD range

**PEERS:**  
Sony KD-40W705;  
Panasonic  
TX-40CS520;  
Samsung  
UE40J6300

**WHILE THERE'S NO** doubt that we're hurtling towards a 4K/UHD TV future, we're not quite there yet. Much as we might love 4K, there are still a huge amount of living rooms, bedrooms, kitchens and studies across the UK where 4K is either not wanted, not needed or not affordable. So it's good to know there are Full HD sets like this Philips that still care about picture quality.

Unbox the 40PFT6510 and it immediately makes a winning impression. Its thin frame is finished in a light silver hue, its rear is adorned in a fashionable white, and its left and right sides produce a riot of coloured light that can be set to match – with impressive tonal and positional accuracy – the content of the images you're watching courtesy of Philips' Ambilight technology. Spectacular stuff for a £480 TV.

The 40PFT6510 continues to set a great up-front tone with its connections. It carries four HDMI – as many as I'd expect from even

the most expensive TVs – as well as three USBs and built-in Wi-Fi for multimedia playback. It can also go online, of course, and unlike previous Philips TVs the online features available are pretty interesting thanks to the introduction of Google's Android TV platform. This hugely boosts the number of apps Philips can offer (previously it's been behind the pack when it comes to on-demand content), and it runs on the 40PFT6510 more slickly than it does on Sony's sluggish Android sets.

It's a pity Philips doesn't provide a point and click-style interface to accompany the Android engine, though its large remote is unusual for sporting a full QWERTY keyboard on its rear.

## Potent potential

The 40PFT6510 boasts some seriously potent picture specifications. It's lit by a direct LED rather than edge LED system, which should lead to enhanced contrast – especially as the

lighting system is powered by a Micro Dimming Engine that analyses the image across 6,400 separate segments for improved accuracy.

An 800Hz-like motion reproduction system should keep judder and blur at bay, and – best of all – the 40PFT6510 carries Perfect Pixel HD, Philips' most powerful non-4K image processing suite.

## 'The set's direct LED array and Micro Dimming tech deliver an outstanding contrast performance'

One further surprise considering this screen's price is its active 3D support, although no 3D glasses ship with the set, and none were available in time for this review.

I could, however, test the 40PFT6510's 2D performance, and I'm happy to report that this is excellent.

### King of contrast

The star of the show is the screen's contrast. The direct lighting and Micro Dimming technology allows it to deliver an outstanding combination of deep, black colours and punchy bright scenes without either feeling forced or unnatural. Even better, the screen delivers the simultaneous dark and light elements of scenes like Max's frantic tunnel escape near the start of *Mad Max: Fury Road* exceptionally effectively.

There's no issue with backlight clouding either, and nor do you feel distracted by the light halo problems that often show up with direct LED TVs.

The 40PFT6510's black level talents provide an excellent foundation for the



**HD excitement**  
With its combination of Android smarts, killer looks, excellent pictures and sub-£500 price tag Philips' 40PFT6510 injects some much-needed excitement back into the HD TV market. It will easily cut the mustard as a second room screen or centre-point of a budget AV setup. And it makes me keen to see what Philips' imminent new range of 4K TVs can accomplish ■

The 40PFT6510 is a Full HD style icon

screen's wider colour palette. It rises to the challenge of *Mad Max...*'s insanely varied, often ultra-bright and ultra-stylised presentation supremely well, delivering it with a combination of subtlety and aggression that's practically unheard of on today's increasingly limited Full HD TV pool.

Colours hold up nicely during darker sequences too, while the precision of the colour and greyscale handling joins forces with Philips' impressive video processing to craft some of the sharpest, most detailed-looking HD pictures I've seen. What's more, the Perfect Pixel HD system works so effectively that the sharpness is delivered without the image tipping into edge noise or excessive grittiness.

Good native motion-handling keeps images blur- and reasonably judder-free, even through *Mad Max...*'s most kinetic sequences. However, if you want to try the provided motion processing, be assured that it improves clarity quite nicely without causing excessive processing side effects. As long as you use it on a relatively low-powered setting, that is. Set it to maximum and the effect is unpleasant.

With Philips' processing also doing an unusually good job of upscaling standard-definition sources, it's tough to find fault with its pictures. The best I can muster is that, as with most LCD TVs, the screen loses contrast and colour if viewed from an angle of more than 30 degrees. You'll also need to be careful when using some of the TV's processing tricks, such as Super Resolution and HD Natural Motion, to avoid image-affecting side effects. But this isn't too onerous a burden given the results you can achieve after a tweaking session.

The 40PFT6510 doesn't handle *Mad Max...*'s woofer-blowing soundtrack as effectively as it handles its explosive visuals. The climactic multi-car battle sounds bass-light, slightly harsh and occasionally a little distorted at 'cinematic' volumes. Provided you stay within its volume limitations, though, the 20W speaker array ditches the harshness and distortion to leave you with good detailing and a fairly wide soundstage.



→ Philips has ditched its previous smart hub in favour of Google's Android OS. The result is an increase in video-on-demand options and a neater-looking interface, albeit with a few operational bugbears

### SPECIFICATIONS

**3D:** Yes. Active (no glasses supplied)

**4K:** No. 1,920 x 1,080

**TUNER:** Yes. Freeview HD

**CONNECTIONS:** 4 x HDMI; 3 x USB; RF input; CI slot; component video input; headphone jack; Scart; Ethernet

**SOUND:** 2 x 10W

**BRIGHTNESS (CLAIMED):** N/A

**CONTRAST RATIO (CLAIMED):** N/A

**DIMENSIONS (OFF STAND):** 918(w) x 532(h) x 64(d)mm

**WEIGHT (OFF STAND):** 8.8kg

**FEATURES:** Built-in Wi-Fi; USB and DLNA multimedia playback; Bluetooth and NFC connectivity; Android TV smart system; Perfect Pixel HD video processing; two-sided Ambilight

### HCC VERDICT



#### Philips 40PFT6510

→ £480 approx → [www.philips.co.uk](http://www.philips.co.uk)

→ Tel: 0207 949 0319

**HIGHS:** Exceptionally sharp pictures for HD; superb contrast and colour; Ambilight is fun; decent value

**LOWS:** Care needed with picture processing options; harshness at loud volumes; Android TV system is cumbersome

**Performance** ★★★★★

**Design** ★★★★★

**Features** ★★★★★

**Overall** ★★★★★

# A little goes a long way

Artison's Nano 1 is the smallest subwoofer **Mark Craven** can remember encountering. So what's the appeal of a bijou bass box?



**WHEN IT COMES** to bass, bigger is generally better. After all, hitting low frequencies at high output requires large drivers able to shift plenty of air, and said drivers obviously need to be mounted in sizeable boxes. In an ideal world, we'd all have 18in woofers the size of a Smart car.

But that utopia is unrealistic. More often we crave subs that'll do justice to a movie's LFE channel yet fit snugly into our system; trading in a few Hz bass extension for a manageable form factor and a sensible price tag.

Artison's Nano 1 takes that craving to the extremes. Billed by the US marque as the 'world's smallest high-performance subwoofer,' it is insanely compact (just 19cm wide) yet employs dual, active 6.5in bass drivers – thus claiming the same surface area as a single 8in woofer – scared into life

by a 300W amp and DSP engine. The rigid aluminium-based enclosure and internal design aim for a vibration-free, inert box, and it claims a frequency response down to 32Hz (-3dB).

In use, the Nano performs admirably, with musicality a strong point. From

## AV INFO

**PRODUCT:** Compact dual active 6.5in subwoofer

**POSITION:** Artison's debut standalone woofer

**PEERS:** REL Habitat; Velodyne MicroVee 6.5; Q Acoustics 3070S

the disturbed drum 'n' bass of Ed Rush & Optical's Sick Note to the frothy pop of Meghan Trainor's *All About That Bass*, this diminutive woofer grabs on to a track's low-end and runs with it. Its output is fulsome and inviting, tight rather than bloated.

And with the Châlus Castle attack sequence in *Robin Hood* (2010, Blu-ray), the Nano handles the chaos well. Falling French archers hit the ground with morbid thuds; wooden siege equipment rumbles along with believable body. It goes reasonably loud, too, and free from any disagreeable cabinet rattle.

Ultimate extension is as advertised. This sub drops deep, but not to subterranean depths. The delicious slow-mo bass drop that marks Tom Cruise's tumble into the deserted library in *Oblivion* loses its authority the lower it goes. But elsewhere in that sequence, the Nano easily adds scale to the soundmix as Cruise fends off a bullet-happy drone.

## Bass in every place

Of course, if it's real depth you seek, the Nano isn't for you. And this wee woofer works well in other areas. Moved from movie room to office, it became the ideal partner to a pair of Simple Audio desktop speakers. And I can envision it making a neat ancillary to a soundbar/base with a subwoofer output.

Operation isn't all plain-sailing: the Nano is a bit of a sleepy-head. It takes a good while to wake up (the manual suggests 30 seconds is normal as the onboard microprocessor boots), and while I appreciate having a remote control, the woofer wasn't quick to respond to this either. Going from low to high volume is no quick tap-tap-tap.

There's a wireless transmission kit available (£125), and this takes a while to pair, too (and on occasion took more than one try). For installations where tidiness is paramount (certainly one of Artison's targets) the wireless add-on will make a good buy; others will make do with careful cable management.

By no means budget, Artison's Nano 1 is a niche-filling sub that elicits a surprising amount of low-frequency fun from its Ant-Man body ■

## SPECIFICATIONS

**DRIVE UNITS:** 2 x 6.5in bass drivers

**ENCLOSURE:** Sealed

**FREQUENCY RESPONSE:** 32Hz-160Hz

**ON BOARD POWER:** 300W RMS

**REMOTE CONTROL:** Yes

**DIMENSIONS:** 190.5(w) x 203(h) x 228(d)mm

**WEIGHT:** 11kg

**CONNECTIONS:** LFE input, via 3.5mm adaptor; phono line-level input; built-in wireless input for optional transmission kit

## HCC VERDICT

### Artison Nano 1

→ £800 approx → [www.red-line.co.uk](http://www.red-line.co.uk)

→ Tel: 01268 858 222

**HIGHS:** Compact form factor; tight, fluid bass delivery; optional wireless transmission kit

**LOWS:** Bigger, deeper bass is available for less; operation a little sleepy

**Performance** ★★★★☆

**Design** ★★★★☆

**Features** ★★★★☆

**Overall** ★★★★☆

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Designed and built in Sweden – for more info go to [primare.net](http://primare.net)



**karma**  
karma-av.co.uk  
01423 358 846

\* "Hi" in Swedish

# An Ultra HD contender

Samsung's mid-line 4K LED TV will appeal to those who can't afford the brand's premium curved screens. **Adrian Justins** cues up his UHD content

**THE UE55JU7500 IS** a curved mid-ranger from Samsung's 2015 lineup of UHD models but retains many of the elements of the SUHD flagship range, including the Tizen operating system, some whizz-bang image-processing and a deluxe design. Missing from the features roster is an ultra-bright nanocrystal wide colour panel and HDR support, making it a potential no-no for UHD Blu-ray hopefuls. Meanwhile, the tethered Mini Connect box packs HDMI, USB and digital optical audio connections, but doesn't house the set's processing, limiting its upgrade path.

The screen uses locally-dimmed direct LED lighting. This, of course, dictates that its body is fatter than a pallet load of OLED panels – with the added bulk of the curve, it measures 114mm deep off its stand. Not that you can tell when sitting directly opposite, which is where you'll need to be to avoid the geometric distortions that occur with off-axis viewing, not to mention some noticeable colour wash.

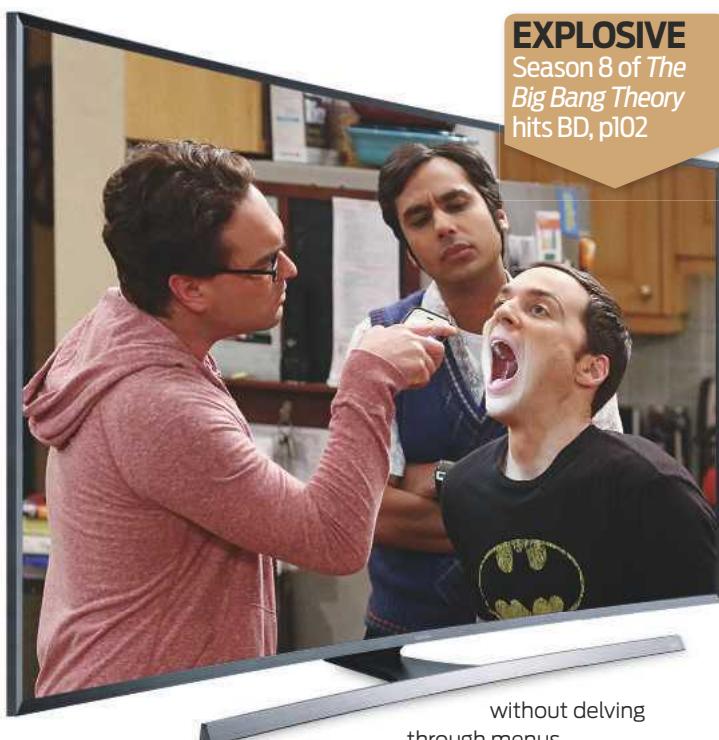
The TV has a number of convenience features such as Wi-Fi Direct, voice and gesture control, 3D viewing (active, no glasses supplied), wireless soundbar hookup to compatible models, DLNA playback, mobile mirroring and TV-to-mobile viewing.

## AV INFO

**PRODUCT:**  
55in UHD curved LED screen

**POSITION:**  
Mid-range 4K model

**PEERS:**  
LG 55UF950V;  
Panasonic  
TX-55CX802B;  
Sony KD-55X850C



without delving through menus.

The range of catch-up providers includes BBC and C4 but not (yet) ITV or Channel 5. More critically, it supports Netflix and Amazon Prime and thus can show UHD on-demand services. Hook up a BT TV UHD box and you have access to all of the UK's current 4K services, which ultimately get the most out of the 3,840 x 2,160 panel. With native 4K football via BT, this screen is an absolute dream, delivering pictures of barnstorming clarity with pin-sharp details, be they the faces of the watching fans or the outline of the players seen from afar. Warning – the Imperial Leather softness of the same game in HD is hard to bear after you become used to such clarity. Upscaled Blu-rays fare better, with Samsung's processing crafting a clean, stable and perceptibly sharp image.

Elsewhere, the screen does a fine job with the subtle, murky, low-light images in *Sneaky Pete*, a US crime series in UHD on Amazon Prime. Black levels are generally very impressive, although the set isn't immune from backlight clouding at its edges. Colours have vibrancy and exhibit smooth blends.

Add in decent motion handling and there's no doubt this is an accomplished screen. Yet with Sony and Panasonic both offering 4K TVs with HDR support at this price point, it's not quite a no-brainer purchase ■

## SPECIFICATIONS

**3D:** Yes. Active  
**4K:** Yes. 3,840 x 2,160  
**TUNER:** Yes. 2 x Freeview; 2 x satellite  
**CONNECTIONS:** 4 x HDMI; 3 x USB; component video; composite AV; Scart; Ethernet; stereo audio; digital optical audio; headphone; IR control  
**SOUND:** 40W (2 x 10W, plus 20W Woofer)  
**BRIGHTNESS (CLAIMED):** N/A  
**CONTRAST RATIO (CLAIMED):** N/A  
**DIMENSIONS (OFF STAND):** 1,239(w) x 718(h) x 114(d)mm  
**WEIGHT (OFF STAND):** 17.4kg  
**FEATURES:** Ultra Clear Pro panel; 1,400PQI motion; Tizen Smart Engine; UHD Micro Dimming; Precision Black; Auto Depth Enhancer; Peak Illuminator; Mega Contrast; Quad Core processor; built-in Wi-Fi; USB and DLNA multimedia playback; web browser; dual remotes; USB PVR recording; Wi-Fi Direct; Football Mode; Multi-screen mode; Screen Mirroring; TV SoundConnect; Voice control; Motion control; Mini One Connect box

## HCC VERDICT

**Samsung UE55JU7500**

→ £1,600 approx → www.samsung.co.uk  
→ Tel: 0330 726 7864

**HIGHS:** Superb colours and clarity with native 4K sources; easy-access smart TV system; good connectivity

**LOWS:** No 3D specs provided; dull design; loses contrast/colour punch off-axis; not HDR; rather pricey

**Performance** ★★★★★

**Design** ★★★★★

**Features** ★★★★★

**Overall** ★★★★★

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# Now TV is back in black

Sky has released a second-generation streaming box for its Now TV service. The hardware is still titchy, as is the price tag. **Grant Rennell** investigates



## THE LATEST ROKU-MANUFACTURED

box for Sky's Now TV internet streaming service (essentially Sky without the need for a Sky box, satellite dish or contract) improves on the previous model by having a processor that's five times faster, 1080p rather than 720p video output capability, an Ethernet port (Wi-Fi still comes built-in), a microSD card slot and USB port – although neither of the latter two could be used for anything at the time of writing. It can also now pass surround sound via HDMI up to 7.1. It's a considerable revamp in tech terms, and goes a long way to explaining why this second-gen streamer costs £15, rather than a tenner.

Now in black, the Now TV box is a good-looking, palm-sized affair accompanied by a cute little remote control that includes home and playback buttons and one each for Now TV and Sky Store. As with other Roku kit, it's easy to set up and has an appealingly simple user interface.

The lineup of pre-installed apps (or 'streaming channels') isn't bad and more can be downloaded from the Roku Channel Store. So as well as Now TV and Sky Store (movies

to buy or rent) you can gorge on BBC iPlayer, ITV Player, All 4, Demand 5, BBC News, BBC Sport, Sky News, Sky Sports News HQ, TuneIn Radio, YouTube, Spotify and more.

Netflix, as before, remains absent. Previously, we thought this was fair considering Now TV is a rival service in many ways. However,

the playing field has changed since; Amazon's Fire TV hardware is Netflix-enabled, for instance. (Amazon Prime Instant Video doesn't feature here either, just so you know).

Now TV includes live TV and on-demand content from 13 entertainment channels (including Sky Atlantic and Sky 1), Sky Movies, and Sky Sports (live streaming only). On-demand content and Sky Sports is available in HD, although nothing higher than 720p at the moment. Various 'passes' are purchasable, and this is where, for many, Now TV earns its spurs – a Movies monthly pass costs £9.99; an Entertainment monthly pass costs £6.99. A day's access to Sky Sports will set you back the same. Note that some retailers sell the box bundled together with passes.

Series boxsets in the Entertainment section are a major draw, but this isn't an all-you-can-eat proposition – I found the full run of *Boardwalk Empire* and *The Walking Dead* available, but only the first seasons of *Game of Thrones* and *Penny Dreadful*. Image quality – both live and on-demand – is solid, courtesy of Sky's adaptive bitrate streaming.

## Smart upgrade

There's a lot to like here, especially if you want to watch Sky content without a subscription or have a TV in need of a smart upgrade. Being able to take passes on an ad-hoc basis is a boon, and the movie content puts the likes of Netflix and Amazon to shame.

However, the feature set currently pales in comparison with more expensive products, including other hardware made by Roku and Amazon's Fire TV – future updates may unlock the potential of those USB and SD card slots. Adding Plex media server support remains a faff. If you're shopping for a 'bells and whistles' media player, your needs are better served elsewhere. Otherwise, jump onboard ■

## AV INFO

**PRODUCT:**  
Affordable streaming box delivering pay and free content

**POSITION:**  
Replaces the previous (£10) Now TV box

**PEERS:**  
Amazon Fire TV;  
Roku Streaming Stick;  
Chromecast

## SPECIFICATIONS

**CHANNELS:** Now TV, BBC iPlayer, ITV Player, All 4, Demand 5, BBC News, BBC Sport, Sky News, YouTube, Facebook Photos & Video, Spotify, Flickr and others

**CONNECTIONS:** 1 x HDMI output; microSD card slot; Ethernet port; USB port

**DIMENSIONS:** 25(h) x 89(w) x 89(d)mm

**WEIGHT:** 141g

**FEATURES:** 720p and 1080p capable; 7.1 and 5.1 surround sound support; integrated 802.11n Wi-Fi; IR remote; less than 3.5W power consumption when streaming HD video; HDMI cable included

## HCC VERDICT

### Now TV box

→ £15 approx → [www.nowtv.com](http://www.nowtv.com)

**HIGHS:** Great price; easy to use; enjoy Sky programming without the need of a satellite system

**LOWS:** No Netflix or Amazon Prime support; USB and microSD card slot weren't usable; some 'missing' on-demand content

**Performance** ★★★★★

**Design** ★★★★★

**Features** ★★★★★

**Overall** ★★★★★

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# Samsung WAM7500 (R7)

**Danny Phillips** believes this egg-cellent speaker could crack the multiroom market

## AFTER WATCHING SONOS

take multiroom to the mainstream, Samsung jumped on the bandwagon with last year's impressive M3, M5 and M7 speakers, and now follows them with the flagship R7 (AKA the WAM7500).

Visually this is a real statement piece, particularly when perched on the optional tripod stand. And it gets even better close-up, with its classy soft-touch coating and chrome base.

The egg-shaped enclosure and Ring Radiator tech – developed at Samsung's new Audio Lab facility in Los Angeles – deliver omnidirectional audio that aims to sound the same no matter where you are in the room. A gap two-thirds of the way down



disperses sonics from the down-firing 5in woofer, while a 1in tweeter on top fires high frequencies through an 'Acoustic Lens'. Unlike last year's models, the R7 doesn't require a dedicated 'Hub' to function – it works on your Wi-Fi network – and operation is easier thanks to a revamped smartphone app. The layout is more intuitive than before, cutting out unnecessary menus. You can send music from DLNA servers, Spotify, Deezer, JUKE, Napster, Qobuz, 7digital or 8tracks to other R7s around the house, or simply stream via Bluetooth 4.0. Two R7s can be used in a stereo pair or as rear speakers in a 5.1 setup – the level of flexibility here is impressive.

The R7 is a fabulous performer too, offering powerful, detailed and well-balanced music playback. Some Samsung systems have gone too tubby in the bass department but the R7's lovely sense of balance and refinement makes it the brand's best-sounding speaker to date. The omnidirectional dispersion really works too – music remained tonally consistent as I walked around the room, although there's a slight dip in bass if you place the R7 below waist height.

So overall, Samsung's R7 is a terrific multiroom speaker on all fronts – even if it is a little pricey ■

## HCC VERDICT

**Samsung WAM7500 (R7)** → £500

**Overall** ★★★★☆

www.sengled.com → £150 approx

# Sengled Pulse

These app-controlled lightbulbs want to give **Adrian Justins'** speakers a run for their money

**SPEAKERS BUILT INTO** lightbulbs aren't a new concept but Sengled, which has moved from simply making LED bulbs to also producing smart LED bulbs, has spiced things up with the world's first set of stereo lights. Featuring drivers made by JBL, each 14cm-tall bulb has a 105° angle of beam projection, a claimed 600 lumens

light output and a colour temperature of 2,700K (warm white to you and me). Power

consumption is rated at 13W, rising to 30W with the speakers working.

Setup is a simple procedure, with Sengled recommending that each bulb is located at the same height for optimum stereophonic reproduction. You install the master bulb, pair your smartphone or tablet to it and run the Pulse app, which allows you to add a second, slave bulb. You can chose whether to operate each bulb as part of a stereo pair or as two separate monos. The app allows you to dim the light level independently of the sound level so you can run the speakers without having the lights on. Unlike some not-so-smart lights you can still operate the lightbulb using the light switch. More importantly, this overrides the app so not only can you use the light whenever the smartphone is absent, you can use the switch to quickly prevent unwanted aural pollution.

It's a speaker! And a lightbulb!

Every time you turn the main switch on the master bulb makes a two-tone announcement that it's ready to play. My slave bulb emitted a quiet but noticeable high-pitched whine when switched on without music.

Streaming music proved stable and reliable and the units worked fine as lightbulbs. The speakers have a reasonably even response through the frequency range aside from the bass, which is woefully ill-served. The sonic quality here is only really suitable for casual background use but would be fun at a party, especially as Sengled has plans to allow the master to control seven slave units ■

## HCC VERDICT

**Sengled Pulse** → £150

**Overall** ★★★★☆

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Room photography courtesy of Admit One Home Cinema.



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# Accessorize me! Headphones

A good pair of headphones can keep you enjoying your AV setup at unsociable hours. Night-owl **Ed Selleys** auditions four contenders all priced between £250 and £350

**IT'S A SITUATION** that most of us can relate to. You want to watch a movie but for a variety of reasons, that's not a terribly practical idea. Maybe it is very late at night and other members of the house are trying to sleep in peace. Maybe you have neighbours who really don't take kindly to full-bore AV on a Sunday morning. Or perhaps there's simply someone else in the room that doesn't want to watch what you do. In all these cases, a good pair of headphones can be an AV life-saver – no system should be without a pair.

Even with their traditional stereo driver arrays, a full-size design can be a very

accomplished substitute for a full surround system and keep you listening when it would otherwise be impossible. By the time you reach the £250-£350 level, a number of

**'Maybe you have neighbours who don't take kindly to full-bore AV on a Sunday morning'**

full-size models are available, while smaller 'hybrid' designs that have one ear on mobile use also compete. None of them should be too much for an AV receiver to handle, but performance may benefit from a dedicated headphone amp.

## Tanks! Tom-toms! Electronica!

For this test our awesome foursome were asked to reproduce the bombastic tank warfare in *Fury* and the final rendition of *Caravan* in drumming drama *Whiplash*, plus give a spirited rendition of *Leave a Trace* by Chvrches, streamed via Tidal. Here's how they got on.

Approx £330 → [europe.beyerdynamic.com](http://europe.beyerdynamic.com)

## Beyerdynamic T70

These cans deliver an excellent all-round performance whatever you throw at them



**THE SECOND MOST** expensive headphones on test, the T70s sit about halfway up Beyerdynamic's range. They use the company's own 'Tesla' driver system, so named because the annular magnet has a strength of one tesla (T) through the hole in the middle.

The T70s are the home version of the model – there's an easier-to-drive portable model also available (the T70P) – and is a closed design built around a pair of metal drivers of unspecified size. At 417g, they're the heaviest pair here, but Beyerdynamic has ensured excellent weight distribution and they feel impressively solid. The looks are unremarkable, but inoffensive too.

The T70s tie with the Oppos as the most comfortable headphones, and are a pleasure to wear for long periods. And you'll want to keep donning the Beyerdynamics because they didn't put a foot wrong in this test. Connected

to my AVR, the T70s motor their way through *Fury* with real vigour. Explosions have tangible weight; shells and ricochets move convincingly around your head. Dialogue stays crisp and distinct amidst the mayhem. Everything sounds very together.

The different requirements of *Whiplash* are also dealt with well. High-speed percussion is clear and immediate, the supporting brass has an accurate tonality, and it is easy to hear separate instruments in the mix. The Chvrches track combines the need for heavyweight bass and a refined top end. It isn't hugely surprising to find that the T70s are on top form here too...

### HCC VERDICT

Beyerdynamic T70 → £330

Overall ★★★★★

# Grado SR325e

Sticking to a tighter budget? Then check these out

## THESE AFFORDABLE HEADPHONES

have a rather timeless quality to them. The SR325es are almost entirely new but the appearance is little changed from the previous model or indeed any other Grado headphones dating back for years. Despite this, many areas have seen revision, including the drivers, the driver housings and the cable. Grado still won't tell you anything about what those drivers are, though.

Like all Grado headphones, these are open-backed, meaning you will leak a lot of noise. They have a few quirks, too. The cable is 1.8m long – perhaps a little too

### HCC VERDICT

**Grado SR325e** → £300

**Overall** ★★★★☆

brief for AV purposes, and the SR325es are also the model most likely to be making its presence felt on your head by the end of a long film as the padding isn't very substantial. The build is of a very high standard, although these are the only cans in this quartet supplied without a case.

The SR325es do a number of things right. The detail retrieval in *Fury* is excellent, with dialogue and incidental effects coming to the fore. The open-back design gives them a spaciousness that widens the presentation very effectively. Compared to some of the larger models, the bass isn't as deep but it is very detailed and agile. This speed means that the *Whiplash* sequence is brilliantly handled and the Grados have a real snap and sense of energy. There's a huge amount of

information on offer and these cans do a fine job of processing it.

With the Chvrches track, the slight lack of bass weight hinders the piece but the same speed remains. If you can live with the short cord and noise leakage, Grado's SR325es have much to recommend them.



Approx £350 → [www.oppodigital.co.uk](http://www.oppodigital.co.uk)

# Oppo PM-3

'Phones for use both at home and on the move

LIKE THE COMPANY'S more expensive headphones, Oppo's PM-3s use planar magnetic drivers – a membrane which has a voice coil printed on it, resulting in a light and strong driver with exceptionally fast responses. The PM-3s are designed to make these benefits work in a pair of headphones that can be used at home and on the move; they're a closed-back design and intended to be more sensitive than normal planar magnetic headphones. This being said, the Oppos are still the least sensitive model in the test.

They're very comfortable to wear thanks to a thickly padded headband, and are well built and endowed with sleek styling. The decision to fit them with a detachable cord is a good one, too. Oppo supplies short and long cables with the PM-3s and a decent carrying case. Of all four auditioned here, these are the best suited for all-round use.

The planar magnetic drivers give the PM-3s some impressive strengths but some

weaknesses, too. The field attack sequence in *Fury* comes across coherent and detailed with a good sense of realism to sound effects, but it also lacks a little top-end excitement and can sound a touch dull in comparison to other models. Incoming German bullets just don't have the energy that they do elsewhere.

Equally, the bass – while agile and nuanced – lacks the impact of the dynamic driver models, and this means that the *Whiplash* sequence is robbed of some of its energy. That same midrange cohesion does mean that the supporting instruments sound absolutely fantastic, though.

With Chvrches' *Leave a Trace*, that excellent midband makes it easy to forgive the slightly soft frequency extremes but they are there nonetheless.



Overall, the Oppo PM-3s are versatile, smart and capable of great performance. But for outright cinema thrills they have to take a backseat to some rivals here.

### HCC VERDICT

**Oppo PM-3** → £350

**Overall** ★★★★☆

# Sennheiser HD650

Shop about for these and you can find big savings

**NOTIONALLY THE MOST** expensive model in the test (with a launch price of £400), it is now possible to find the Sennheiser HD650s selling in the UK for less than the price of the Grado SR325es, so the field is tighter than it might first appear. Why the price drop? Most likely because the HD650s are a little long in the tooth now – and the titanium silver finish looks a little on the dated side. Still, the open-backed design with beefy 40mm drivers – hand-picked for optimum pair matching – offers the potential for heavyweight sound.

There are a few minor oddities to the HD650s that need to be taken into account. Like some other Sennheiser models, these 'phones aren't as comfortable as you think they should be, with slightly aggressive loading on the headband and a cable which is too close to your face. Like the Grados, the noise leakage is also very high. The build quality is excellent, though, and the

lengthy 3m cable makes listening easy. You also get a large but sturdy box to lug them about in.

With movies, the Sennheisers put in a strong performance. There is a healthy bass response which gives *Fury*'s action scenes the necessary weight needed to sound convincing, and this is mated to a realistic and detailed midrange that separates dialogue and effects brilliantly. Only a very slight harshness to the top end spoils the effect. This is also something that can be experienced with the *Whiplash* sequence, where the crashing cymbals can feel slightly sharp in their presentation.

There is no arguing with the drive and excitement of the HD650s, though, and the performance with my go-to Chvrches track is equally lively.

Add in that tempting price point and you've got a very talented set of cans, albeit with some niggles in comfort and use.



## HCC VERDICT

**Sennheiser HD650** → £360

Overall ★★★★☆

# Final standings

**HOME CINEMA HEADPHONE** buyers are looking for style, comfort and excellent all-round performance. A reasonable price tag helps, too. Do any of this foursome fit that bill? Yes, actually...

**YOUR EXACT REQUIREMENTS** will shape your own personal ordering for this test but unless you want to also use one of these headphones on the move, the Oppos are probably the most compromised for employment as a home cinema set. The use of planar magnetic drivers means that while the PM-3s are very refined and have excellent midrange and imaging, they are a little soft at frequency extremes. That said, there are wonderfully comfortable.

The Grado pair, by contrast, are fast and dynamic with particular strengths towards music but the noise leakage from the design, short cable and limited long-term comfort count against them. These tie in third place with the PM-3s.

Sennheiser's cost-savvy HD650s are a great offering. They have a sound signature that is big, powerful and packed with detail, and thanks to being open-backed like the Grado pair, they sound airy and spacious. Yet they can tip over into treble harshness and the comfort levels aren't as high as they could be.

### Comfort and audio quality

On the other hand, Beyerdynamic's T70s are incredibly comfortable. They also rival the open-back models for the spaciousness of their presentation, while leaking no noise, and deliver a performance that is detailed, accurate and excellent fun. Not be the most exciting-looking headphones around – or the most affordable – but a seriously good proposition ■



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## LONG-TERM TEST

# Monitor Audio MASS

TIME ON TEST

Three years

REVIEWER

Mark Craven

### AV INFO

**PRODUCT:**  
5.1 sub/sat  
speaker system

**POSITION:**  
Below the Apex in  
Monitor Audio's  
speaker line

**PEERS:**  
Tannoy HTS-101XP;  
KEF E305

**WHILE FLATSCREEN TVs** and AV receivers can sometimes feel that they require upgrading every year or two, speaker packages typically put no such strain on your wallet or the technical capabilities of your setup. Brands are likely to run with a system for a long time if it's a good seller. Monitor Audio's MASS 5.1 array is an example – launched in 2012, it's still part of the British company's ensemble.

When we first auditioned it, the package had a ticket price of approximately £800. Now you can grab it for a couple of hundred quid less. And many retailers sell it as a 5.0 set – minus the sub – for just £300.

#### What's good about it?

Design and styling of the satellite speaker is bang on the money, especially if you're hunting for cabinets that look a little different to the competition. Each MASS 10 satellite stands approximately 22cm high and 13cm wide, becoming thinner as it tapers at the top and bottom ends. Three of its sides are wrapped in black speaker cloth, while the rear (which

houses the brand's familiar HiViLL reflex port) is black plastic. Each end features a natty aluminium plate – the bottom one pops off to provide access to the speaker terminals.

It's a good looking system, then, and technically impressive, too: the speakers (including the centre channel) use a two-way driver configuration of custom designs; a 4in mid/bass driver made from a ceramic-coated aluminium/magnesium composite (C-CAM), and a 1in C-CAM tweeter with a gold anodised finish. The material aims to be light, rigid and low-distortion.

There are various installation options. You can wall-mount the satellites via their single-point fixings, shelf-mount them (the centre is supplied with a cradle to stop it rocking as it has no horizontal flat surface), or fork out £125 for a pair of stands. The latter are a decent option. They're slim but sturdy, and feature speaker terminals on their plinths, which neatens up your cable runs.

In terms of performance, I enjoyed the MASS 5.1 array the first day I heard it, and



nothing much has changed in the interim. It's a clean, crisp-sounding package that relishes the snap, crackle and pop of Hollywood blockbusters. Although overall scale and output is limited in comparison to floorstanding and larger bookshelf designs, these will happily drum up a soundfield large enough for a small/mid-sized movie room.

High-frequency presentation is great – the C-CAM tweeters have a nice blend of attack and refinement, and I've become accustomed to soundstages peppered with distinct, believable effects. Bass performance is very good for the money. The 220W, 10in subwoofer (which has a second 10in passive driver) is a



The sub offers three EQ presets

bit of a brute, bringing low-end authority to film and music material and making up for the satellite speakers' short-comings in this regard. It integrates well, goes reasonably low and exhibits nimble feet. Most importantly, it has the ability to make the whole system sound bigger than it really should.

#### What's not so good about it?

The subwoofer, as noted, is an impressive LFE lover. However, its design is rather wacky. Opting to angle its sides to mirror the styling of the MASS satellites at first seems like a good

**'What the MASS system has going for it is its clean, punchy and detailed performance'**

idea, but over time I've grown to realise that I like my subs cubed and discreet. Also, it's rather big considering the dimensions of the rest of the array, and takes the sheen off what is undoubtedly meant to be a lifestyle proposition. You'll need to find space for it.

These are minor niggles concerning the sub; another one is that the control panel is situated right at the base and will most likely be a pain to access. It's here where you'll find an EQ switch for Music, Film and Impact settings, but chances are you won't be bothered to experiment frequently.

Another concern – although one shared by practically all compact setups – is how to integrate these speakers with Dolby Atmos upfitters. Top-mounting is simply not an option. An Atmos-centric sub/sat system can't come soon enough.

#### Should I buy it?

There's been an explosion of speaker packages around the £600-£800 price point recently, meaning Monitor Audio's MASS 5.1 is up against some stiff competition. Tannoy's HTS-101XP, Q Acoustics' 3000 Series, Wharfedale's Diamond 220 HCP and DALI's Zensor Pico have all arrived this year; other older rivals, such as KEF's E305, are still going strong. Choosing a package at this price point is therefore no easy task, and in addition to personal preferences regarding sound quality, design and size will play a part in finalising a shortlist.

What the MASS system has going for it is its clean, punchy and detailed performance – although some may hanker for something with a little more warmth and mid-range body. The fit and finish is tidy, and the optional stands are definitely worth considering. An obvious audition, particularly if £600 is as high as you can go ■

#### SPECIFICATIONS

##### MASS 10 SATELLITE

**DRIVE UNITS:** 1x 4in C-CAM midbass driver; 1x 1in C-CAM tweeter

**ENCLOSURE:** Ported

**FREQUENCY RESPONSE:** 80Hz-30kHz

**SENSITIVITY:** 84dB

**POWER HANDLING:** 100W

**DIMENSIONS:** 224(h) x 128(w) x 128(d)mm

**WEIGHT:** 1.65kg

##### MASS CENTRE

**DRIVE UNITS:** 1x 4in C-CAM midbass driver; 1x 1in C-CAM tweeter

**ENCLOSURE:** Ported

**FREQUENCY RESPONSE:** 80Hz-30kHz

**SENSITIVITY:** 84dB

**POWER HANDLING:** 100W

**DIMENSIONS:** 128(h) x 228(w) x 128(d)mm

**WEIGHT:** 1.65kg

##### MASS W200 SUBWOOFER

**DRIVE UNITS:** 1x 10in C-CAM long-throw driver; 1x 10in auxiliary bass radiator

**ENCLOSURE:** Sealed

**FREQUENCY RESPONSE:** 40Hz-120Hz

**ON BOARD POWER:** 220W

**REMOTE CONTROL:** No

**DIMENSIONS:** 420(h) x 385(w) x 385(d)mm

**WEIGHT:** 16kg

**CONNECTIONS:** Stereo phono input; LFE input

#### HCC VERDICT

##### Monitor Audio MASS 5.1

→ £600 approx → [www.monitoraudio.co.uk](http://www.monitoraudio.co.uk)  
→ Tel: 01268 740580

**HIGHS:** Slick multichannel performance; excellent build quality and design; optional stands; good value

**LOWS:** Speaker terminals are a bit fiddly; limited in scale and output; woofer a bit big

**Performance** ★★★★★

**Design** ★★★★★

**Features** ★★★★★

**Overall** ★★★★★

WIN

# AN ARCAM SOLO BAR PLUS PREMIUM SOUNDBAR

**THE SOLO BAR** Plus is the new, improved version of Arcam's debut soundbar – the 'Plus' denoting that it has undergone software tweaks and subtle re-voicing to boost its already high-quality performance. And, in the Brit audio brand's drive to rid our living rooms of weedy sonics, it's lowered the price point of the Solo Bar Plus to £650 – the original Solo Bar hit retailers at around £800.

We've got one Solo Bar Plus to give away to a lucky reader, courtesy of our pals at Arcam. To be in with a chance, all you need to do is enter this competition...

#### Premium powerhouse

The Solo Bar Plus offers the build quality that we've come to expect from Arcam. Measuring 110cm wide to make it a great partner for a largescreen TV, the Solo Bar Plus boasts a rigid aluminium construction to prevent unwanted resonance, and packs premium components including the same Wolfson anti-jitter circuitry featured in Arcam's AVR range. A bracket is provided for wall-mounting, and non-slip feet cater for table-top placement.

Within its curved edge cabinet are six drivers – four 4in mid/bass units and two 1in tweeters, arranged in a stereo configuration. Powered by a high-quality 100W amplifier and onboard DSP, they deliver an authentically cinematic sound,

digging out the details in Blu-ray soundtracks (the Solo Bar Plus can decode Dolby TrueHD and DTS-HD Master Audio bitstreams), TV and music. It has an assured delivery across the frequency band – bass is muscular but controlled, dialogue and vocals have weight and nuance, and high-frequency effects are clean and distinct.

User tweaks can be made via either the supplied handset or Arcam's neatly-designed smartphone/tablet app (iOS/Android). Preset modes for Stereo, Movie and Concert let you match the soundbar's sound to what you're watching or listening to; you can also use a supplied calibration microphone to measure your room and have the Solo Bar Plus tailor its performance accordingly.

Got plenty of sources? No problem. Arcam's forward-thinking soundbar has four HDMI inputs and one ARC-capable HDMI output, all 4K-enabled, allowing for ultimate system versatility. Coaxial, optical and 3.5mm audio inputs, and a subwoofer pre-out, are also present, as is apt-X Bluetooth for streaming audio. Furthermore, the Solo Bar Plus can be set to output via Bluetooth to compatible headphones – ideal for late-night listening.

Overall, this is a talented and versatile soundbar that will bring audio excellence to any setup. So what are you waiting for? Enter before the deadline and good luck! ■



For more info  
on the Arcam  
Solo Bar Plus, visit  
[www.arcam.co.uk](http://www.arcam.co.uk)



'Arcam's Solo Bar Plus is a talented and versatile soundbar that brings audio excellence to any setup'



**The bar uses a six-strong driver array**

#### Competition rules

1. The first entry drawn at random will win the prize.
2. Only one entry per person/household; multiple entries will be discarded.
3. Entrants from the UK only.
4. Employees of MyTimeMedia Ltd and companies supplying competition prizes are not eligible to enter this competition.
5. Please ensure your personal details are correct, as they will be used to contact you if you win.
6. No alternatives, cash or otherwise, will be offered to the winner as prizes.
7. The editor's decision is final.
8. Comp winners' info available upon request.
9. The closing date for entries is November 23, 2015.

**Be in with a chance of winning an Arcam Solo Bar Plus by answering the following film-related question:**

**Q:** What's the name of Han Solo's spacecraft?

- A)** Millennium Falcon
- B)** TIE Fighter
- C)** Imperial Star Destroyer

#### HOW TO ENTER:

Simply email your answer (either A, B or C) to [competitions@homecinemachoice.com](mailto:competitions@homecinemachoice.com) with the subject line 'Arcam'. You must include your name, address and contact telephone number.

The closing date for this competition is November 23, 2015. Please read the terms and conditions (left) before sending in your entry.



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# DIGITAL COPY

With TV showing a greater interest in ultra-wide formats – black bars and all  
– **Mark Craven** wonders if consumers are ready for hardware to match

**SOMETHING WEIRD IS** happening in the world of broadcast TV. The 2.35:1 aspect ratio (or variants of it) is breaking out of the cinema and into UK living rooms. You may or may not have noticed – I suppose it depends how much of a format geek you are – and you may or may not like it. I do. I'm a wide-boy at heart.

I first noticed this a couple of years ago, while watching – of all things – a Jamie Oliver-hosted cookery programme. The nation's favourite chef was knocking up some rather tasty-looking nibbles in regular 16:9, before the director decided to switch to 21:9 for a few moments. It was an interesting visual flourish; we're used to wide formats being employed to showcase sweeping vistas in Hollywood Westerns, not bowls of pasta salad. More recently, I've seen commercials, plus UK dramas such as C4's *Cucumber* and the Beeb's *Doctor Foster*, ignoring the regular 16:9 framing. Netflix's *House of Cards* shapes its political shenanigans at 2.0:1. Content creators everywhere are embracing their inner John Carpenter.

## Beware the black bars!

TV broadcasters have a curious relationship with aspect ratios. For yonks, 4:3 was the way to go even though it had long been dumped by the movie industry. Indeed, as the recent Blu-ray release of the HBO series *The Wire* reminded us, major productions were still being shown at 4:3 in the 21st century. Why? Because, the argument went, the majority of people still had 4:3 TV sets and didn't want to see any black bars. This always struck me as a bit odd – are people really that averse to a couple of slabs of nothingness? Apparently so, to the point that studios were happy to let their cinematic output be reformatted for domestic

consumption; the VHS era was blighted by pan-and-scan releases that took your favourite widescreen movie and reworked it as a barely rectangular disaster. And I do mean disaster: **for years the BBC was showing a pan-and-scan version of Brian de Palma's *Carlito's Way* that at one point resorted to simply squeezing the image to fit it to 4:3.** The result? Al Pacino appeared seven feet tall and skinny as a rake.

The adoption of 16:9 by TV manufacturers, meanwhile, has caused more headaches for broadcasters. Programmes that originally aired at 4:3 now come with black bars left and right. Oh no! The solution, in the case of never-out-of-syndication sitcom *Friends*, has been to dig out the original uncropped footage, lop a bit off the top and bottom, and – ta-da! – you have 16:9, occasionally with crew members floating around the sides.

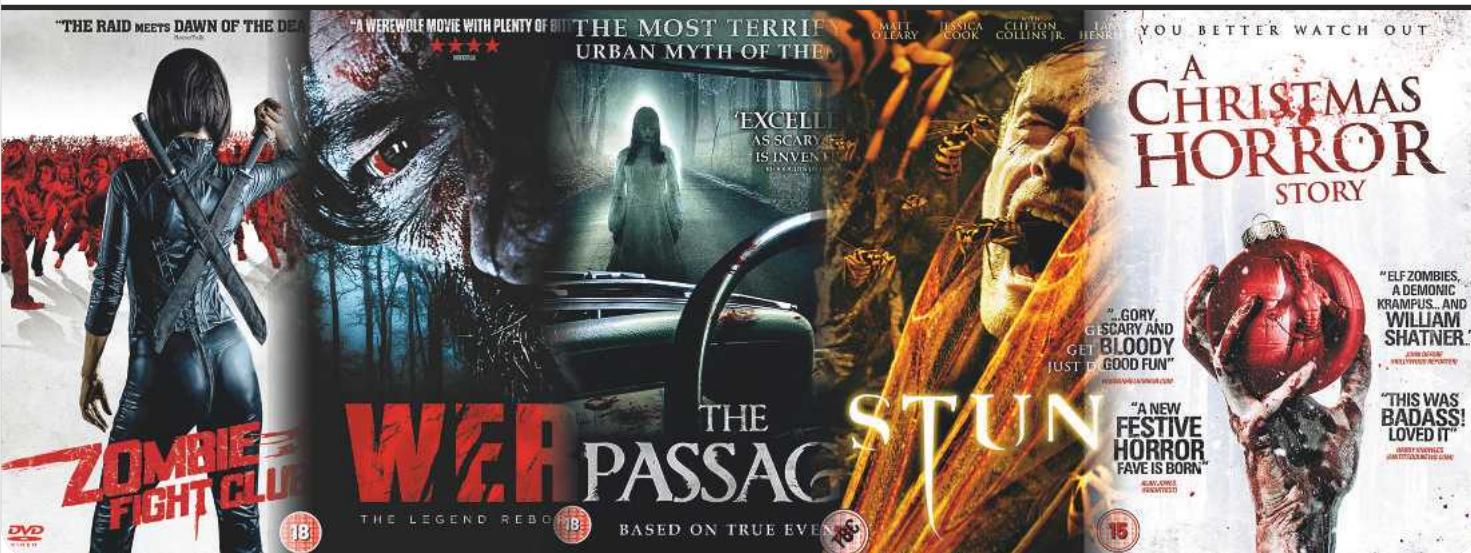
So we've had the broadcast industry catching up with hardware. I'm curious to see if the growing use of wider ratios will result in the opposite. A good few years ago Philips released its 21:9 TV range. It wasn't, as far as I can gather, very successful (do you know anyone who owns one?), but could it be it was just too far ahead of the game? Prototype 21:9 4K sets (dubbed 5K by wily marketers) have been appearing at tech shows recently – it may transpire that letterbox TVs are the natural style successor to curved models.

With them, however, will come more black bars on the sides of 16:9 material, meaning the *Friends* team will have to go back to the cropping board once again. Or, you know, just expect people to put up with them... ■

*Do black bars get your goat? Was pan-and-scan a pain? Let us know: email letters@homecinemachoice.com*

**Mark Craven** is working on specialist contact lenses that will place black bars top and bottom of his eyesight for an everyday CinemaScope vibe





# FILM FANATIC

What manner of unspeakable terrors or devilish delights lie in store for **Anton van Beek** as he delves into the world of direct-to-DVD horror films?

**I LOVE HALLOWEEN.** Not the John Carpenter film (well, I love that too), but the day itself. And being Team HCC's resident fright fan, I get a kick out of seeing my inbox fill up with press releases for the multitude of direct-to-disc horror flicks that labels dump onto DVD and Blu-ray in the weeks leading up to October 31.

In an effort to help you navigate the titles that will be filling supermarket shelves as you read this column, I spent a spooky night with five of them. I hoped to find some genre gems among the glut of low-budget, low-IQ duffers.

First up was the intriguing-sounding Taiwanese flick *Zombie Fight Club*. Sadly, any prior visions I had of a movie mash-up of George Romero and David Fincher were banished by a boring tale of an apartment complex in Taipei being overrun by the undead. A random shift of direction (after an hour...) finally sees the film live up to its title, with the action moving to an arena where people duke it out with zombies. Yet even this wasn't enough to overcome the terrible performances, lifeless action scenes, inane plotting and rampant misogyny. Thankfully, as with all direct-to-DVD frighteners, I knew it would all be over in 90 minutes.

Certain that things could only get better from this point, I decided to chance my luck with revisionist werewolf flick *Wer*.

There are few things I like more than a good werewolf film – the only trouble is that most of them are awful. And as this one was directed by William Brent Bell – the man responsible for 2012's diabolical *The Devil Inside* – things weren't looking too hopeful. It was therefore a treat to discover that his latest effort is a neat, fresh take on the werewolf genre. To say much about the plot is to ruin the surprises that this enjoyable film has in

store, but with its mix of grimy chills, political chicanery and faux-documentary stylings, *Wer* succeeds in doing something unique with this most maligned of horror creations.

**Also well worth a look is *Stung*, a gloriously daft B-movie throwback about giant mutant wasps attacking a party.**

This proves just as adept as provoking laughs as it does at throwing gore around. Heck, even genre stalwart Lance Henriksen comes out of this one looking good, which definitely isn't something you could say about *Gingerclown 3D*. Or *Sasquatch Mountain*. Or *Hellraiser: Hellworld*. Or *The Mangler 2*. Or... well, you get the picture.

#### **Wake me when this is all over...**

Unfortunately, things took another downturn with Australian chiller *The Passage* (AKA *Lemon Tree Passage*). Billed on the cover as 'The most terrifying urban myth of them all', a more accurate description would surely be 'The most soporific ghost story of them all'. Still, if nothing else, it allowed me to catch up on some much-needed sleep.

Rounding out my never-seen-the-inside-of-a-multiplex movie marathon was *A Christmas Horror Story*. From Krampus to changelings, murderous spectres to Santa Claus battling zombie elves, this horror anthology has something for everyone when it comes to delivering festive frights with lashings of freaky fun. It's been added to my Christmas playlist alongside the likes of *Die Hard* and *Gremlins*.

So: five direct-to-DVD horrors, three of which actually turned out to be pretty good. Just steer well clear of Taiwanese zombies and Aussie ghosts and you should be fine ■

*Can you recommend any great direct-to-DVD movies? Let us know: email letters@homecinemachoice.com*

**Anton van Beek**  
loves Halloween  
(the holiday)  
mainly because  
it gives him an  
excuse to break  
out his *Halloween*  
(the film) Blu-ray  
boxset. Again



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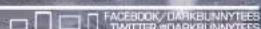
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# PICTURE THIS

HDR promises visual fireworks, but calibrator **Vincent Teoh** is baffled by all the different nit numbers bandied about and reckons an established standard is needed

**LET'S TALK NITS.** No, I'm not referring to head lice, but a measurement unit for brightness which has gained prominence in recent months with the advent of HDR (High Dynamic Range) content and displays. The metric equivalent for one nit is one candela per square metre ( $\text{cd}/\text{m}^2$ ), and one candela is roughly the luminous intensity emitted by a candle.

According to the Society of Motion Picture and Television Engineers (SMPTE), the peak luminance for a reference studio display should be  $120\text{cd}/\text{m}^2$ , whereas the DCI standard for cinema is  $48\text{cd}/\text{m}^2$ . I routinely calibrate TVs to  $120\text{cd}/\text{m}^2$  for clients in a dimly-lit room (ideally from bias lighting, see *HCC* #247) for critical viewing, but will target higher luminance levels for daytime viewing and in a brighter room to overcome the washout effect caused by ambient light. My personal highest record was  $350\text{cd}/\text{m}^2$  for a Panasonic AX902 LED TV that's wall-mounted in a conservatory.

These (puny) figures are thrown right out of the window when it comes to HDR. Because the real world exhibits a far greater range of brightness than existing television and cinema standards – the brightest part of a yellow flower petal under the sun can go as high as 14,000 nits, for example – HDR has been developed to bridge the gap.

There's one (glaring) problem. There's currently no standard for the peak luminance requirement before a display can be deemed HDR-capable, although many different numbers have been suggested here and there. LED LCD manufacturers like Samsung and Philips have been targeting 1,000 nits in 2015, and are hinting at pushing the limits even higher to 1,200–1,300 nits for next year.

Meanwhile, Dolby, a chief proponent of HDR, has built a Pulsar studio monitor boasting a staggering peak brightness of 4,000 nits, which the firm is

pitching to grading suites interested in fulfilling the creative intent of HDR masters. Not content with this, Dolby is working towards displays that can hit 10,000 nits – purportedly the typical light output of an indoor fluorescent tube that's bright but not painful to look at. And this number's easy to measure and remember too, the company claimed.

(OLED TVs aren't going to do 1,000 nits anytime soon – let alone 10,000. LG and Panasonic are quoting a peak brightness of around 400 nits on their 4K HDR OLEDs, stressing that despite this relative low number, OLED can actually achieve a greater dynamic range than LED LCD TVs thanks to OLED's absolute blacks.)

## Maps to the stars

So how is HDR content which is graded at 4,000 nits supposed to look on an HDR-capable TV that can only deliver a peak brightness of 400 or 1,000 nits? The answer lies in tone mapping, where values in the transmitted HDR images are mapped to the display's native capabilities (taking into account black level, peak white and colour gamut) with the goal of remaining as faithful as possible to the original artistic intent. As you can imagine, dark scenes will likely look better on OLEDs, while LED LCDs will have the advantage in brighter sequences.

Throughout this chaos, the UHD Alliance is working furiously to establish clear specifications (based on consumer feedback) to certify premium UHD products that deliver HDR experiences of the highest quality. Unsurprisingly from initial testing, consumers prefer HDR over what's now known as SDR, and brighter settings over lower. It looks like the future's bright, and will only get brighter ■

*Have you experienced HDR? Were you impressed?  
Let us know: email [letters@homecinemachoice.com](mailto:letters@homecinemachoice.com)*



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# Feedback

Got an axe to grind? Need to comment on current technology?  
Want to share your knowledge with our readers? **HCC** is here to help

## Where's my Atmos mix gone?

I have received my Blu-ray copy of *The Age of Adaline* from Amazon. This is a film I may not have purchased but for its listing on the Dolby website for films with Atmos and Blu-rays with Atmos. I realise this is possibly aimed at the American market but it has never been wrong before. This disc has only DTS-HD Master Audio 5.1 and no mention of Atmos on the box. Is there any explanation why?

*M Jennings, Berkshire*

**Anton van Beek replies:** *The Age of Adaline* was released in cinemas with a Dolby Atmos soundtrack and has been given

a Blu-ray release in the US with an Atmos mix, too. However, while the movie was put out on Blu-ray in the States by Lionsgate, it's being distributed in the UK by Entertainment in Video, and it would seem that the company has chosen not to include the Atmos mix – hence the DTS-HD 5.1 track.

It is being flagged up on Dolby's website as an Atmos Blu-ray, but this site is US-centric. I know you pre-ordered the title from Amazon (eager to get your next Atmos fix, no doubt!), and the listing there doesn't mention anything about the sound formats included

on the disc – hardly ideal.

In future I'd suggest perhaps waiting until a title is released so you can see if it definitely has an Atmos mix in the UK – or to look out for early confirmation, either in HCC or on some of the Blu-ray-focused websites such as [www.blu-ray.com](http://www.blu-ray.com).

## Help me upgrade!

I am in the process of upgrading my home cinema and hi-fi system but desperately need help.

My home cinema consisted of a Toshiba 55in rear-projection TV, Yamaha RX-V995 amp, Sony DVP-S725D DVD player and Bose Acoustimass 10 Series 2 speaker

system. My hi-fi system consisted of a Marantz PM-94 amplifier, Marantz CD-94 CD player, Linn Sondek record deck and Spendor S100 speakers. Pretty good systems in their day. I now have a Sony KD-65S9005B TV, Sky+HD 2TB receiver and ASUS RT-AC87U AC2400 wireless router.

I love 3D cinema, but am yet to explore 4K as this appears to be simply not available either on TV or Blu-ray.

I want advice on Dolby Atmos- and DTS:X-compatible amplifiers and Blu-ray players. I realise I may have to wait until next year to get suitable components and even longer for

## ★ STAR LETTER...

## 4K and HDR – what a mess!

Before starting I would like to say that I have been reading the magazine over the last four years and find it to be a great resource and an enjoyable read.

My irk is this: 4K comes along and evolves – or rather makes it really difficult to get onboard with. The first 4K TVs came with HDMI 1.4a and no HDCP 2.2, then they come with HDMI 2.0 but no HDR, then I see that HDR will be released slowly into the higher-end versions.

Add to the evolution a really small amount of content and I ask myself: am I at least three or four years away from joining in?

In many reviews I have read here and elsewhere there has been no real indication of what HDR was in the beginning or that HDCP would be an issue to get 'full-fat' 4K.

After a while HDR starts to get talked about and HDMI 2.0 is also on the agenda, starting with only

one port and not necessarily having HDCP 2.2 implemented.

Even this year, until the announcements, you still had to pay well in excess of £2,500 to be sure that you were actually 4K-ready.

I have come to the end of my tether. I understand that companies need to make money and also keep the buying public interested with new features and technology, but I'm glad I have waited. I'd have ended up with a TV that would not handshake with a 4K Blu-ray player.

And to add to my annoyance, both the Blu-ray Disc Association and the HDR federation (for the want of checking what that group is

called...) have taken well over a year to get the standards agreed.

I want to buy a 4K HDR TV and a Blu-ray player to match it, but there isn't a screen below £2,000 yet and Blu-ray isn't coming until at least March. 4K content is pay-per-view at the moment and Netflix is waiting

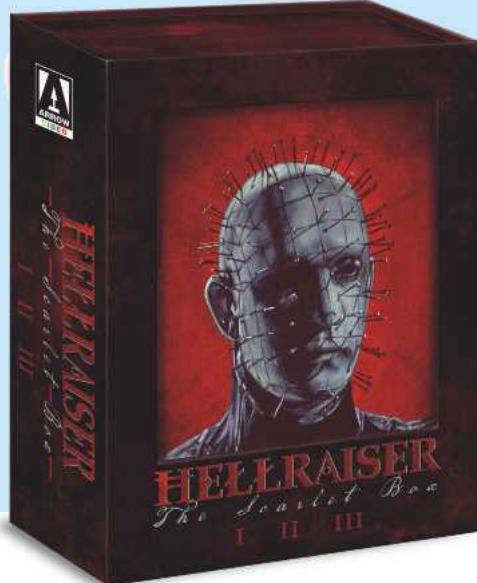
before introducing HDR content as well.

We are two years into this technology. I am appalled at how the majors have half-baked its introduction. The companies have the technological capabilities and a software updating process – why could they not at least ensure proper 4K TVs from the off, even if it meant having to pay for an HDR update? The wait goes on. I will, of course, continue to read HCC to pass the time.

*Gordon Wheeler, via email*

**Mark Craven replies:** I expect many other HCC readers have similar thoughts – the slow-burn roll-out of 4K Blu-ray is enough to make us long for the glory days of the HD DVD/Blu-ray format war!

In my opinion, flatscreen manufacturers did a fair thing in releasing 4K hardware when it was ready – it's nearly three





Sky and Blu-ray content to become available. Cost is not a concern (I estimate both units in the region of £2,500-£4,000) but quality is.

Can I add to/adapt the Bose speaker setup or would you

recommend a change of speakers (I realise some adaptions will be needed for true Dolby Atmos). Unfortunately, I'm a little restricted on speaker space so floorstanding speakers would be out in preference for bookshelf size.

Hope you can help.  
Clive Eich, via email

**Mark Craven replies:** Hi Clive. If you want to get a sonic upgrade to Atmos and DTS:X you will certainly need to upgrade your Yamaha amplifier and your Sony DVD player too. The latter because Atmos and DTS:X soundtracks are currently found on Blu-rays only; the former because that somewhat elderly model isn't able to decode such soundtracks.

But, let's start with the Bose speakers. For Atmos you will need to add a minimum of two height speakers. These can either be fitted in/on your ceiling or be reflective 'upfiring' models that bounce their output off your ceiling. Choosing upfiring is the easiest solution – fitting architectural speakers involves a decent amount of D.I.Y. and careful thought about placement. Bose doesn't sell any upfiring models, so you'll be looking at options from brands including Onkyo, Atlantic Technology and KEF. The R50s

from KEF – reviewed last issue – are our current favourite upfiring, but don't even think about mounting these on top of your Bose models – they're bigger and will most likely fall off. You'll need to find shelves/mounts to fit these into your room. In truth, this will give you great flexibility about where to place them, which may help get the most from Atmos soundtracks.

In terms of a Blu-ray player, any deck you buy should play out an Atmos Blu-ray fine. You say cost is no object but as you're already running a hi-fi setup you might want to ignore the high-end audiophile machines (the likes of Pioneer's BDP-LX88 and Cambridge Audio's CXU) and get an affordable model and see how you rate the performance. This way, when 4K Blu-ray decks arrive, you won't feel as bad swapping out your player. Check out models such as Sony's BDP-S7200 (£180) and Panasonic's DMP-BDT370 (£130).

For the AVR, ignore models pre-2015 as these won't decode DTS:X (although many handle Dolby Atmos). Denon's AVR-X7200WA and Onkyo's TX-RZ800 are both options, and include support for HDCP 2.2 – meaning you could

passthrough 4K Blu-rays (if you eventually go down that route) and Sky 4K (when it comes) to your Sony TV – although note your Sony won't offer HDR visuals. Incidentally, you say you can't get currently any 4K content – your Sony will allow access to Netflix and its 4K streams. Perhaps get a month's trial?

#### Sack these people!

Having just listened to the new *Avengers: Age of Ultron* Blu-ray, I am upset regarding the dismal audio engineering on the disc.

If I were the boss of DTS, I would have already fired the audio engineers responsible, and whichever body passed this disc as acceptable for sale also needs sacking. How can a disc of such poor audio quality be approved for sale? It is not known, yet, whether the problem is only with European authoring. I have a German and British copy which are both the same.

It will be interesting to see whether the American version has suffered the same fate.

It is, I am afraid, up to prominent magazines like *HCC* to remonstrate on our behalf to those companies that produce such poor quality and I sincerely hope you continue to do this on all equipment and discs that do >

years now since we looked at LG's debut 84in UHD set. Yet content has been slow to arrive – be it movies or console games – and Netflix has become an unlikely 4K flag-waver. And at some point, creatives decided resolution wasn't enough and HDR was added to the mix, leaving early 4K hardware looking old. Which, to an extent, it is.

Format launches need both hardware and software industries to be on the same page. In this case, it looks like they haven't even been reading the same book...

Star letter-writer Gordon wins a copy of Arrow Video's *Hellraiser: The Scarlet Box*. Available now and limited to 5,000 copies, this Blu-ray boxset includes new restorations of the first three *Hellraiser* films, plus a vast array of bonus features.

not meet the stringent standards we expect.

*Stephen, via email*

**Anton van Beek replies:** You can get our opinion on the *Avengers: Age of Ultron* Blu-ray mix on p96. Suffice to say, we agree with you – something has gone a bit wrong here, especially considering how aggressive and immersive it sounded in cinemas. Having said that, the internet is awash with others who think the mix is fine, just a bit quiet, and suggest all that's needed is a big turn of your amp's volume knob. This certainly helps, but in our view can't muster up dynamic punch that wasn't there.

#### Help me set up my 'phones

I was delighted to get the Sony MDR-HW700DS headphones the other day to complete the home cinema setup (JVC DLA-X500R projector, Denon AVR-X5200W, Oppo BDP-103D Blu-ray player) but cannot find a way to connect them.

These cordless headphones are driven from a controller unit cabled into the AV system. The instructions for all the different connection variations want an optical out return from the TV. The projector doesn't include an optical out!

The advertising material for the headphones includes the use of projectors but no indication of how they're wired in to the headphone controller unit. As one of your Top 5 headphones, how did you connect them up?

*Mervyn Leach, via email*

**Steve May replies:** Sony's MDR-HW700DS headphones are very versatile and the 9.1 soundfield they create is highly immersive – they're a neat addition to a home cinema. However, setup can be complex and the supporting manual/online help guide aren't the most straightforward, so I can see why you may have come unstuck.

To connect to your speakerless projector, ignore all the

references to HDMI ARC and optical outputs. Hook up your Blu-ray player to the Sony headphones' control box via HDMI, and connect the control box's HDMI output to your AVR's HDMI input. Then connect the HDMI output on your AVR to the input on your projector. An alternative is to run your sources through your AVR first, but this means only audio formats supported by your AVR are sent on to the Sony controller.

#### Do I wait for more OLED TVs?

So I've been waiting all this time for a flatscreen UHD OLED and just as LG announces one Panasonic throws its hat in the ring (and we know the processing on the Pana is already more desirable), so do I wait another year or more for Panasonic to introduce a 55in OLED flatpanel (it's as large as I can fit in my room) and at a more realistic price? The wait for UHD, for me, never ends. I deliberately haven't watched any of the Netflix or

Amazon shows filmed in UHD in anticipation. Now they're talking 8K TVs, too. Do I wait? I only had my 720p Pioneer six months before they introduced 1080p!

Come on guys, hurry up. I've got £4,000 burning a hole in my bank account waiting for my next TV!

*Ian Caslake, via email*

**John Archer replies:** £4,000 isn't going to get you Panasonic's 65in OLED so I suppose you'll have to wait! I have no confirmation it will expand its OLED line, but given the level of interest in its debut screen I expect it will. See what's announced at CES in January ■

#### CONTACT US...

Write to HCC, AV Tech Media Ltd, Enterprise House, Enterprise Way, Edenbridge, Kent, TN8 6HF, or email us at [letters@homecinemachoice.com](mailto:letters@homecinemachoice.com)

**Please note:** we cannot guarantee to print/answer all the letters we receive. Sorry.

## Win! Great Blu-rays up for grabs

Just email your answer to [Competitions@homecinemachoice.com](mailto:Competitions@homecinemachoice.com) to be in with a chance



#### Slow West

Kodi Smit-McPhee and Michael Fassbender star in this Western about a young man searching for his long-lost sweetheart. *Slow West* is released to buy on Blu-ray and DVD on November 2.

Lionsgate Home Entertainment has ponied up five Blu-rays to give away.

#### Question:

*Slow West* writer/director John Maclean was a member of which Scottish band?

#### Answer:

- A) The Proclaimers
- B) The Beta Band
- C) Primal Scream

Email your answer with '**Slow West**' as the subject heading – and don't forget to include your postal address!



#### Hannibal: The Complete Season Three

The final season of the critically-acclaimed crime drama is now available to download and own on DVD and Blu-ray, courtesy of StudioCanal. To be in with a chance of winning one of three Blu-rays, answer the following question correctly...

#### Question:

Which of the following is not the title of one of Thomas Harris' Hannibal Lecter novels?

#### Answer:

- A) Red Dragon
- B) The Silence of the Lambs
- C) Hannibal Rising

Email your answer with '**Hannibal Season 3**' as the subject heading – and don't forget to include your postal address!



#### Spy

Melissa McCarthy's smash hit action-comedy *Spy* explodes onto Digital HD on October 23, followed by Blu-ray and DVD from November 9. Thanks to Twentieth Century Fox Home Entertainment we've got five copies of the *Spy* Blu-ray up for grabs.

#### Question:

*Spy* director Paul Feig is currently shooting a reboot of which 1980s film franchise?

#### Answer:

- A) Back to the Future
- B) Gremlins
- C) Ghostbusters

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We will also be offering a concessionary £15 day pass for subscribers of *Hi-Fi News* and *Hi-Fi Choice*, details of which will be announced soon. Please return regularly to [www.hifinews.co.uk/show](http://www.hifinews.co.uk/show) for more details.



Great headphones deserve great headphone amplifiers and this will be your first chance to audition Trilogy's new 931. A purely analogue single-ended Class A design, the 931 promises to be a real treat for your cans.

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# Project and serve

HCC reader **Chris Osbourne** gets his movie and gaming fix from this affordable projector-and-screen setup – but has his eye on an Ultra HD TV, too

## Introduce yourself...

My name is Chris Osbourne, I'm 30, and I work as a Fire Health and Safety Officer.

## How long have you been into home cinema – and what was the first setup you had?

I have been into home cinema since I was a kid when my dad bought me a 34in CRT TV, which at the time was considered a big screen. He set it up with stereo speakers and that was that – I've been hooked ever since!

## What's in your system now?

I've got an Epson EH-TW5900 projector and a 100in matt grey motorised screen; a Windows HTPC running XBMC; Pioneer AVR and 5.1 speaker system; Logitech Harmony

touch remote; LightwaveRF wireless lighting system; and a Sony PlayStation 3.

## What do you love about the setup and do you have anything you'd change?

For the money I have spent I am more than happy with my setup, but I wouldn't mind in-wall speakers so it's harder for my little one to get his curious hands on them.

## How much have you spent on it?

With a few Christmas and birthday gifts thrown in, altogether around £1,800.

## How easy was it to fit the motorised projector screen?

With the help of my father-in-law it took no

time at all. As soon as it was up we swapped the control box for a LightwaveRF inline relay switch so it can be controlled from our smartphones and tablets.

## The PJ is mounted in the corner...

I originally wanted to mount it right opposite the screen but my wife didn't want it to be the first thing you see as you walk into the room. The next best thing was in the corner. I've used keystone correction to align the picture – until I can upgrade to a model with lens shift I will have to make the best out of keystone. The PJ is mounted as straight as possible so I only have to use horizontal correction and not vertical. I still get a great picture with a lot of detail.



### What's next on your equipment wish list?

I think the next piece of equipment will be a Darbee Darblet video processor. I have been told it's more than worth the money, so would love to add one to my setup.

### What's your favourite bit of kit?

My Epson projector. I think the picture quality is amazing for a low-end model and the 3D isn't half bad as well.

### What do friends and family think of your home cinema?

They love it. My wife wasn't too sure to begin with but now we regularly have movie nights and with the projector's living room mode even in the middle of the day sporting events go down a treat. Our friends love to come round, get the drinks in, crank the volume up and watch a big TV event like *The X Factor* final.

### What demo discs do you use?

My go-to disc is *The Dark Knight*. I love the

The entire system has been assembled for just £1,800



opening bank robbery scene; it's great for showing off my setup.

When it comes to 3D you can't go wrong with *Avatar* or *Gravity*.

### And what are your favourite films?

It changes quite a lot but I would have to say *300*, *The Book of Eli*, *The Dark Knight*, *Avengers: Assemble*, *Bad Boys* and the original *Halloween*.

### Are you excited by 4K and Dolby Atmos/DTS:X?

I am very excited about 4K. My next TV will definitely be a 4K set. I had a demo with a JVC e-Shift projector and a Sony native 4K projector and they both looked amazing!

I haven't had the chance to hear any Atmos/DTS:X yet but I just know I will like it – and with prices starting to come down will eventually make the upgrade ■

### SHARE YOUR SYSTEM IN THE MAG!

**IF YOU WANT TO BE THE NEXT 'AV-HOLIC' IN HCC**, you'll need to send us some hi-res images of your cinema room.

The better-quality image we get, the better your room will look. So follow these simple steps:

**1.** Go big. Set your camera to take images at the largest possible size, and at the highest resolution. Don't worry about cropping or resizing – we will make them print-ready.

**2.** Get in focus. Make sure your photos are as sharp and clear as possible. If you have one, use a tripod, or place your camera on a flat, steady surface and take pictures on a delay. The sharper they are, the bigger we can print them.

**3.** Let some light in. While we tend to watch movies in the dark, our

cinema systems look their best when they are lit. If you can shoot with natural daylight, do so. If your room doesn't get a lot of light (a garage conversion, for instance) then switch on whatever lights are fitted. Avoid using flash wherever possible.

**4.** Be thorough. Send photos of as much of the room as possible. Images of both the front and back of the room, the kit rack, speakers, seating, disc shelf, movie poster art... The more the merrier.

**5.** Don't be shy. We'd love a picture of yourself – unless you want to remain anonymous...

**6.** Show us more. Got pictures of your room before it was a cinema? Or snaps of work being done? We love to see these, too.

Email your selection of images to [letters@homecinemachoice.com](mailto:letters@homecinemachoice.com) with the subject heading 'AV-Holic'. Provide us with some information about your setup and we'll then be back in touch.

### ...And blag an AudioQuest Pearl HDMI cable!

The kind people at cable king AudioQuest are giving away a two-metre Pearl HDMI cable to our AV-Holic each month. The Pearl, which retails for £34, uses long-grain copper conductors and a foamed polyethylene insulation for a robust construction. All AudioQuest HDMI cables up to 10 metres meet or exceed the 10.2Gbps maximum data rate for HDMI and are approved High Speed with Ethernet cables.





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# PLAYBACK

→ **SOFTWARE HIGHLIGHTS** AVENGERS: AGE OF ULTRON 3D Iron Man and pals return in this superhero sequel JURASSIC WORLD Monster movie is home cinema dino-mite! JOHN WICK Dishing out revenge in Dolby Atmos OUTLANDER: SEASON ONE Highland TV drama impresses in hi-def HELLRAISER: THE SCARLET BOX Dare you open this deluxe boxset? **AND MUCH MORE!**

## A new hope

**Star Wars: Rebels – Complete Season One**  
Walt Disney → All-region BD



Head back to the birth of the Rebellion as we check out the Blu-ray debut of Disney's new *Star Wars* animated series – p102

### HCC RATINGS KEY...

Outstanding	★★★★★
Above average	★★★★★
Acceptable	★★★★★
Disappointing	★★★★★
Dire	★★★★★



Iron Man has clearly been piling on the pounds since his last film



# Anaemic audio foils heroes

The curse of the Avengers strikes again as Disney delivers another botched Blu-ray platter...

## → AVENGERS: AGE OF ULRON 3D

While Joss Whedon's 2012 smash *Avengers Assemble* remains one of the crown jewels (or should that be Infinity Stones?) of the Marvel Cinematic Universe, his blockbuster sequel is unlikely to be so fondly remembered by fans.

While there's a refreshing focus on supporting characters, no shortage of spectacular comic book action and Whedon's trademark character moments, the movie is dragged down by unexplained/underdeveloped plot detours and an odd tonal imbalance that sees almost everybody firing off snarky wisecracks – including evil artificial intelligence Ultron. It's a solid way to spend a couple of hours, but *Age of Ultron* feels rather inconsequential in the grand scheme being developed by Marvel's superhero movies.

**Picture:** Although both *Avengers* films were shot using Arri Alexa cameras, they look quite different from one another. Not only is *...Age of Ultron* framed at 2.40:1 (the first was 1.78:1), it also appears slightly softer too. That's not to say that there isn't plenty of fine detail in the image (close-ups reveal an abundance of well-defined textures), but overall the image lacks the impressive sharpness and clarity of its predecessor.

Happily, the 1080p presentation of the film's 3D post-conversion is less problematic than we remember the original cinema release being. While the gloomier aesthetic means that some sections



### HCC VERDICT

**Avengers: Age of Ultron 3D**  
→ Walt Disney → All-region BD  
→ £28 approx

**WE SAY:** Marvel's superhero sequel struggles on Blu-ray thanks to its curiously listless soundtrack

**Movie** ★★★★½

**Picture** ★★★★½

**Audio** ★★★★½

**Extras** ★★★★½

**Overall** ★★★★½

look unavoidably flat, on the whole there's a good sense of volumetric depth.

**Audio:** As soon as the film begins and we follow the Avengers as they storm a Hydra base it becomes clear that something has gone awry with the DTS-HD MA 7.1 track on the *...Age of Ultron*'s Blu-ray. While the centre channel sounds as bright and lively as you'd expect, the surround and bass channels are curiously muted and lifeless.

Dialing up the volume on your AVR helps bring the rest of your speaker array into play in a slightly more convincing manner, but also pushes the dialogue too high in the mix and can't really compensate for the lack of dynamic range in the rear speakers.

For fun, we decided to try alternating between the English DTS-HD MA 7.1 and the Spanish DTS 5.1 and Hindi Dolby Digital 5.1 dubs while watching the tower collapse at the climax of the Hulk vs Hulkbuster fight (Chapter 7). While the Spanish dub sounded just as listless as the English lossless track, the Hindi dub offered slightly more impact across the rear speakers (although this is offset by the general lack of weight across the rest of the mix).

Disappointingly, there's no sign of the Atmos track that accompanied the film in cinemas, either.

**Extras:** A rather middling selection consists of a trio of featurettes (a 21-minute *Making of...*, a seven-minute primer on the 'Infinity Stones' and a three-minute piece about shooting the film around the world), four deleted/extended scenes and a gag reel.

On a more positive note, at least UK fans get Whedon's audio commentary this time around.

**Entourage: The Movie**Warner Bros. → All-region BD  
£25 approx

Doing for men and showbiz what the *Sex and the City* film did for women and fashion, *Entourage: The Movie* is glossy, vacuous and utterly lacking in drama when judged solely as a film in its own right. But taken as bigscreen blow-out for the TV show's characters, it satisfies most of the criteria that fans care about and gives everyone the ending they deserve. It also looks and sounds dapper thanks to the Blu-ray's combination of colourful 2.40:1 Full HD visuals and enveloping DTS-HD MA 5.1 audio. As befits the movie, the accompanying featurettes are fun but not particularly in-depth.

**Get Santa**Warner Bros. → All-region BD  
£25 approx

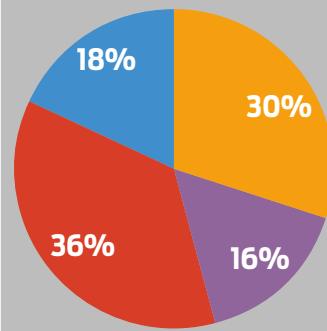
He made a name for himself with fright fans courtesy of *Creep*, *Severance*, *Triangle* and *Black Death* – now British filmmaker Christopher Smith turns his back on gory thrills with this amiable yuletide outing. Jim Broadbent stars as Santa, turning to a hapless ex-con (Rafe Spall) for help in saving Christmas when his reindeer are impounded and he's thrown in prison after crashing his sledge. While it's unlikely to top anybody's Christmas list, this disc still serves up pleasing AVC 2.40:1 1080p imagery and lively DTS-HD 5.1 sonics. Two tiny promo videos are the only extras.

**Iceman**Kaleidoscope → All-region BD  
£18 approx

This remake of Clarence Fok's 1989 martial arts fantasy *The Iceman Cometh* casts Donnie Yen as Ming Dynasty officer He Ying, who is frozen in an avalanche and accidentally thawed out in modern day Hong Kong. Bearing many of the hallmarks of a troubled production (patchy visual effects, an uncertain tone and an incoherent script) *Iceman* is a bit of a mess – albeit one that is still fairly good fun, especially when viewed in 3D (both versions are included on this single-disc Blu-ray). Extras take the form of seven brief *Making of...* featurettes (running 23 minutes in total) and a trailer.

**WE ASKED...****Which is the best of the Jurassic Park sequels?**

- *The Lost World: Jurassic Park*
- *Jurassic Park III*
- *Jurassic World*
- None of them are very good

Results from [www.homecinemachoice.com](http://www.homecinemachoice.com)  
Go online for more polling action

# Doggy death gets on John's wick

Retired hitman hunts down the man who killed his pooch in this brilliant B-movie

**→ JOHN WICK**

He may have been just as active as ever over the past decade, but forgettable dramas like *The Lake House*, *Henry's Crime* and *Generation Um...* have seen Keanu Reeves fade from the minds of most action fans. Thankfully, this hyper-violent revenge thriller finds him back doing what he does best.

Reeves is cast as the eponymous John Wick, a former mob hitman whose wife recently passed away. When his car is stolen and his dog killed by delinquent Russian gangster Josef (Alfie Allen), Wick tools up and heads out for justice – cutting a bloody path through New York's biggest crime syndicate in the process.

Directed by former stuntmen Chad Stahelski and David Leitch, *John Wick* is every bit as remorseless and single-minded as the title character. There's no depth or purpose here beyond the chance to watch Reeves look cool and composed as he blasts his way through an army of extras. Yet the movie does this with so much style (including some astonishing fight choreography) and such an interesting cast of odd-ball characters that it's never anything but enjoyable. *John Wick* is pure B-movie gold.

**Picture:** The HD platter's AVC 2.40:1 1080p encode is a vivid affair packed full of saturated colours and velvety blacks. While the aggressive colour grading has a slight knock-on effect on fine detailing from time to time, for the most part the transfer holds up rather well to close scrutiny. There's plenty to cast your eye over amidst the New York grime.

**Audio:** When *John Wick* hit Blu-ray in the US back in February it was feted for its barnstorming Dolby



Atmos soundtrack. While the Atmos mix on this belated UK release may not have quite the same impact post-*Mad Max: Fury Road*, there's no denying that it remains an effective and evocative affair. Unsurprisingly, the action scenes sound fantastic with bullets ripping through your speaker array – however, the track also dazzles when the action slows down; an early shot of Wick leaving his garage (Chapter 1) provides a convincing sensation of rain falling on you from above.

**Extras:** Warner's disc plays host to a fair selection of bonus features, the best of which is the chat-track by Stahelski and Leitch. Fun and spirited, it provides an interesting account of the film's production that the other extras fall short of.

The remaining goodies are featurettes covering action choreography/training, the filmmakers, the world of *John Wick*'s hitmen, shooting the nightclub sequence and the overall look of the movie.

**HCC VERDICT****John Wick**

→ Warner Bros. → All-region BD

→ £25 approx

**WE SAY:** A fun and ferocious B-movie given premium treatment on Blu-ray when it comes to picture and sound**Movie** **Picture** **Audio** **Extras** **Overall**



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# Film thrill ride has plenty of bite

This genetically-modified blockbuster sequel should leave franchise fans roaring their approval



## → JURASSIC WORLD

Two decades after the disastrous events of *Jurassic Park*, John Hammond's dream has become a reality and Isla Nublar is home to *Jurassic World*, a fully-functioning prehistoric theme park/biological preserve. But in order to stave off audience apathy regarding dinosaurs, the park's scientist team – led by *Jurassic Park* survivor Dr. Henry Wu (B. D. Wong) – have been working on cooking up a new, genetically-modified hybrid: the Indominus Rex.

Of course, as Jeff Goldblum's Ian Malcolm once said, 'Life, uh, finds a way'. Which means that it isn't long before the Indominus rex has broken free of its enclosure and is slaughtering every man, woman and dinosaur in its path. With the InGen corporation once again looking to use the crisis for its own nefarious ends (will it never learn?), it's up to park administrator Claire Dearing (Bryce Dallas Howard) and raptor trainer Owen Grady (Chris Pratt) to save the day.

Now, no matter how hard director Colin Trevorrow tries, there's no way his flick can do anything other than live in the shadow of Spielberg's legendary blockbuster. In the 22 years since *Jurassic Park*, we've seen Hobbits riding eagles and Transformers fighting in the streets of Chicago; *Jurassic World* was never going to

Chris Pratt has also been linked to a reboot of the *Indiana Jones* franchise



Well, it wouldn't be a *Jurassic...* movie if it wasn't putting kids in danger (right)

be able to create the same sense of awe and wonder again.

But *Jurassic World* is a terrific sequel. The idea of dinosaurs chasing people around a small island should be boring by now, but the decision to have the park up and running, serving up a platter of some 20,000 visitors for the big beasts to chow down on, changes things enough for it to feel like the ultimate realisation of this particular concept. Meanwhile, new story ideas involving training dinosaurs and their potential use as weapons open up exciting avenues for this film (and its inevitable follow-ups) to explore.

*Jurassic World* also scores well with its dino stars. They are almost entirely CG creations this time around, but feel just as 'real' as their predecessors and have even more personality.

The Indominus rex is also a success, a scary and unpredictable threat that builds upon author Michael Crichton's original concerns about scientists being so concerned with whether or not they could do something, that they don't consider whether or not they should do it.

The human cast don't fare quite as well, being stock archetypes who are only as interesting as the actors playing them. Luckily the project attracted the likes of Chris Pratt, Bryce Dallas Howard,



## DEMO SCREEN...

## Jurassic World

Time code: 035.44 – 039.24



**Birds-eye view:** The overhead shot of Owen and the others standing in the Indominus rex enclosure showcases some impressive detailing in the detritus littering the ground all around them.



**Run for your life:** The surprise appearance of the Indominus rex is a great test of your display's motion handling and gives the disc's 7.1 mix the chance to show off its LFE skills with every dino footfall.



**Tasty treats:** Having tracked down one of its prey, the hybrid tosses a car in the air (cue more funky bass effects as it lands) before chowing down on an unlucky member of Jurassic World staff.



**Doyouthinkhesaurus:** There's some precise use of the surround speakers and superb shadow detailing on display as Owen hides from the creature beneath another car.

Irrfan Khan and Vincent D'Onofrio, who all work hard with what they're given.

**Picture:** *Jurassic World* comes to life on Blu-ray with a very impressive 1080p encode, framed at the original – and slightly unusual – 2.00:1 aspect ratio. The first thing to strike home is how bright the film looks, with the high-contrast aesthetic balancing deep blacks with dazzling highlights. Colour reproduction is also remarkable, not just with the garish theme-park backgrounds and lush greenery, but also with the subtle nuances it captures in imagery, such as the close-ups of Bryce Dallas Howard's face in Chapter 2.

It's a crisp, sharp image throughout, which benefits both the scaly skins of the CG dinosaurs and the real-world locations they inhabit.

**Audio:** Just like its predecessors, *Jurassic World* boasts an aggressive DTS-HD MA 7.1 track (there's no Atmos mix, sadly) that engages the full speaker array to stunning effect.

Use of the surrounds is impeccable, bringing the locations to life and placing you at the heart of the on-screen action; sequences such as Chapter 13's Pterosaur attack and Chapter 15's Raptor hunt are 21st century versions of the original's



Gallimimus stampede. There's no lack of LFE either, with the weighty appearance of the Mosasaur in Chapter 6 liable to shake your cinema room's collection of toy dinosaurs.

In other words, it's everything a home cinema aficionado could want.

**Extras:** For such a big, VFX-heavy blockbuster, *Jurassic World* offers up a particularly mediocre selection of extras. There's a half-hour *Making of...*; a 16-minute look at the dinosaur effects; a short reel of behind-the-scenes vignettes (possibly leftovers from an abandoned PiP track?); a quick chat with Pratt and Trevorrow; seven deleted scenes and a short (and jokey) tour of one of the main sets.



Universal's familiar 'blade' menu layout is almost as old as the dinosaurs now...



## HCC VERDICT

**Jurassic World**

→ Universal Pictures → All-region BD

→ £25 approx

**WE SAY:** Ignore the disappointing extras and prepare for a monstrous AV experience courtesy of this fun sequel

Movie	★★★★★
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Picture	★★★★★
---------	-------

Audio	★★★★★
-------	-------

Extras	★★★★★
--------	-------

Overall	★★★★★
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## ARCADE ACTION

Bigscreen home entertainment isn't just about movies anymore. Check out this videogame vying for time on your home cinema system...

### LEGO Dimensions

Warner Bros. Interactive Entertainment → Xbox One/Xbox 360/PS4/PS3/Wii U → £75 (Starter Pack)/£27 (Level Packs & Team Packs)/£15 (Fun Packs) approx



14 LEGO worlds – including *The Lord of the Rings*, *The LEGO Movie*, *The Wizard of Oz*, *Ghostbusters*, *Back to the Future*, *Doctor Who* and *Scooby-Doo*. More are promised further down the line.

Created by Traveller's Tales it's hardly surprising that the gameplay itself is reminiscent of the developer's previous LEGO movie tie-ins, asking players to bash everything in sight, collect studs and solve puzzles. This time, however, many of the puzzles require you step out of the game and move the toys around on the seven spaces on the portal to activate different features or prevent the videogame avatars from harm. The downside to this is that these puzzles, while fun, aren't particularly taxing.

Backing all of this up is the developer's trademark brand of humour, which is pushed way beyond anything we've seen before thanks to the pop culture mash-up the game provides. As well as goofy gags to keep kids happy there are thousands of smart in-jokes to entertain adults (we still can't stop grinning about Batman's first encounter with Oz's Scarecrow).

Add-ons come in three varieties: Fun Packs and Team Packs provide new characters/vehicles to play with and can unlock Dimensions within the main game; Level Packs do the same while also providing a new level themed around its characters. While collecting them all would obviously be prohibitively expensive, the game makes no demands on you to do so. Instead, you're free to simply pick and choose those that appeal to you (maybe, *Jurassic World*) and ignore the rest (let's say *LEGO Ninjago*).

All told, *LEGO Dimensions* is both a great game and a great toy, and largely succeeds in removing the distinction between the two.



## Arrow: The Complete Third Season

Warner Bros. → All-region BD  
£40 approx



Following its superb sophomore year, *Arrow* needed to keep the momentum going. Sadly, it wasn't to be, with the writers being far too stop-start in their approach to the season-long arc, and new flashback stories proving particularly dull. Flashes of brilliance remain, though, with episodes like *The Climb* reminding you what the show is truly capable of. As well as impressive 1080p visuals and DTS-HD MA 5.1 sonics, this four-disc set includes two chat-tracks and four featurettes.



## Space: 1999: The Complete Second Series

Network → Region B BD  
£80 approx



While the first series of this Gerry Anderson space-faring sci-fi series took itself fairly seriously, this second run threw any notions of real science out of the airlock in favour of risible rubber monsters and a new member of the crew who can transform into any creature (but usually a dog or hawk). Despite reduced budgets, *Space: 1999* often looks spectacular – as proven by the beautifully restored 1.33:1-framed 1080p encodes on this six-disc boxset. DTS-HD MA 5.1 audio provides ample sonic support. Bonus features are plentiful.



## Mad Men: The Final Season – Part 2

Lionsgate → Region B BD  
£30 approx



As with *The Sopranos* before it, anybody expecting Matthew Weiner's celebrated TV drama to come to a definite conclusion is likely to be disappointed by this final batch of episodes. But while it may not tie everything up in a neat little bow, *Mad Men* remains a slick slice of TV that has maintained an incredible standard across its eight-year life-span. Similarly, this two-disc release's picture, audio and extras maintain the high standard fans have come to expect from the show on Blu-ray.





Jamie's full-body kilt failed to catch on with the other clansmen

# Highlanders reign supreme in hi-def

Genre-defying TV series blends time-travel, romance and historical drama to impressive effect

## → OUTLANDER: COMPLETE SEASON ONE – COLLECTOR'S EDITION

Shortly after the end of World War II, British army nurse Claire Randall (Caitriona Balfe) holidays in Scotland with her husband Frank (Tobias Menzies). While gathering plants near some standing stones, Claire is thrust back in time to 1743. There she becomes embroiled in the Jacobite risings and starts to fall in love with Highland warrior Jamie Fraser (Sam Heughan) – and to complicate matters even further, she also runs afoul of her husband's ancestor, sadistic Redcoat Captain Jack Randall (Menzies, again).

Based on Diana Gabaldon's popular series of historical-fantasy-romance novels, *Outlander* may sound like sub-*Twilight* nonsense, but this couldn't be further from the truth. Produced by Ronald D. Moore (the man behind the acclaimed *Battlestar Galactica* reboot), this series makes for gritty, violent and sexy drama; pulling no punches in depicting the hardship and horrors of its period setting. The fact that it does this from a female perspective makes it all the more welcome and (sadly) unusual.

The cast also deserves a massive amount of credit for making the show compelling. Heughan and Menzies are both excellent, and Balfe truly commands the screen, imbuing Claire with a mix of intelligence, confidence and sensuality that makes her one of modern TV's most fascinating and complex heroines.



**Picture:** *Outlander* cuts a fine figure on Blu-ray, with this set's AVC 1.78:1 Full HD encodes revelling in the natural beauty of the Scottish locations.

Colours veer towards more natural, earthy tones, while skin tones range from naturally pallid to more ruddy, windswept complexions. Blacks are suitably deep and imposing – although are also prone to crush, which does have an effect on shadow detail. Elsewhere, however, fine textures are well resolved.

**Audio:** The series arrives on Blu-ray with a series of effective DTS-HD Master Audio 5.1 soundtracks. Favouring atmosphere over bombastic effects, the mixes make engaging use of the surrounds to create a convincing 360-degree soundscape. Similarly, bass response is controlled, but packs plenty of depth when required.

Meanwhile, dialogue is prioritised in the mix and sounds fine, while Bear McCreary's score carries plenty of range and musicality.

**Extras:** Spread across the set's five hi-def platters you'll find a multitude of deleted scenes; podcast commentaries for the second half of the season; an extended cut of episode 10 (*The Reckoning*) with optional intro by Ronald D. Moore; ten behind-the-scenes featurettes; and a gag reel.

This Collector's Edition boxset also includes some exclusive goodies in the form of four art cards and a 68-page photo-book. A 'standard' Blu-ray boxset without these exclusives is scheduled to follow on October 26, priced around £50.



Hoots! Crivens! Och aye the noo! Jings! Help ma boab! And so on...



## HCC VERDICT

### Outlander: Complete Series One – Collector's Edition

→ Sony Pictures → All-region BD → £60 approx

**WE SAY:** A superb hi-def package for an incredibly addictive TV series

Movie ★★★★★

Picture ★★★★★

Audio ★★★★★

Extras ★★★★★

Overall ★★★★★



# The Force re-awakens on Blu-ray

Disney's enjoyable new *Star Wars* 'toon welcomes fans to the dawn of the Rebellion

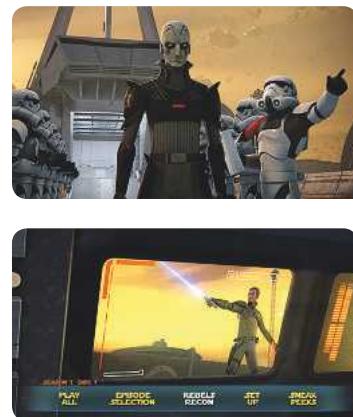
## → STAR WARS: REBELS – COMPLETE SEASON ONE

One of the biggest disappointments of Disney's buy-out of Lucasfilm came with the cancellation of the excellent *Clone Wars* cartoon. Thankfully, rather than wave goodbye to exec producer Dave Filoni and the animation team he put together, Disney enlisted them to create a new animated series designed to mine the extended gap between *Revenge of the Sith* and *A New Hope*.

Following the rag-tag crew of the Ghost as they take on the forces of the Galactic Empire operating around the backwater planet Lothal, *Star Wars: Rebels* delivers plenty of fun for franchise fans of all ages. It also looks and feels like a genuine piece of *Star Wars* thanks to the decision to go back to Ralph McQuarrie's original concept art for inspiration and utilise genuine sound effects from the original trilogy.

It does stumble a couple of times over the course of these first 15 episodes, but *Star Wars: Rebels* has got off to a strong start and events towards the end point towards even greater things from future runs. If you're a *Star Wars* fan then you really need to give it a spin.

**Picture:** It's not particularly shocking to discover that this CG-animated show looks lovely in 1080p. Presented in their original 1.78:1 framing, the Blu-ray encodes are bursting with richly saturated colours, deep black levels, strong contrast and crisply defined digital details. Apart from a handful of instances of banding, on the whole they are also extremely technically proficient, with no significant anomalies such as artefacting or edge halos.



**Audio:** For some reason known only to itself, Disney has opted to limit the audio on this first season of *Star Wars: Rebels* to lossy Dolby Digital 5.1. It's not a deal-breaker, as the mix does a good enough job on its own terms (clear dialogue, rich musicality and plenty of use of the rears), but it's still rather annoying not to get a lossless mix. Fingers-crossed that future seasons will rectify this.

**Extras:** Each *Star Wars: Rebels* episode comes with its own five-to-six-minute *Rebel Recon* behind-the-scenes featurette originally created for the website *StarWars.com*. Also included are a four-minute highlight reel from this year's *Star Wars* Celebration event; four rather wonderful animated shorts (*The Machine in the Ghost*, *Art Attack*, *Entanglement* and *Property of Ezra Miller*); a rather redundant 22-minute recap of the entire season; and a seven-minute look ahead to what Season Two has in store.

## HCC VERDICT

### Star Wars: Rebels – Complete Season One

→ Walt Disney → All-region BD → £28 approx

**WE SAY:** The Force is strong in this cartoon – despite the 'lossy' audio

Movie	★★★★★
Picture	★★★★★
Audio	★★★★★
Extras	★★★★★

**Overall** ★★★★★

## LEGO Justice League: Attack of the Legion of Doom!

Warner Bros. → All-region BD  
£9 approx



This fourth LEGO DC Comics film finds the Justice League facing their toughest challenge yet when Lex Luthor puts together his own super-powered team. Loaded with gags and groans in equal measure, *AotLoD!* is the best LEGO DC Comics film to date.

While this budget Blu-ray can't muster many extras (just a surprisingly in-depth 20-minute piece on sound design), the 1.78:1-framed 1080p transfer and DTS-HD MA 5.1 soundtrack are both extremely satisfying.



## The Big Bang Theory: Season Eight

Warner Bros. → All-region BD  
£35 approx



The fact that Penny's new hairstyle was the most discussed aspect of this 24-episode run speaks volumes about where this popular sitcom found itself in its eighth season. While the show can still generate big laughs, the writers seem to be stuck in a rut, content to have the cast go through the motions, retreading the same old comedic ground. In addition to sharp 1.78:1 1080p encodes and front-heavy DTS-HD MA 5.1 audio, this two-disc set finds space for a gag reel and five featurettes (including a tribute to actress Carol Ann Susi, who died last November).



## The Treatment

Peccadillo Pictures → All-region BD  
£18 approx



Based on British crime writer Mo Hayder's 2001 bestseller, this bleak and uncompromising Belgian-Dutch thriller stars Geert Van Rampelberg as a cop investigating a child abduction, who is haunted by the belief that his own brother was taken by a paedophile 25 years early. Tough as it is to watch, *The Treatment* is a powerful crime thriller that packs a huge emotional wallop and should find favour with Euro/Nordic-noir fans. The film lands on Blu-ray with a suitably gloomy 2.40:1 1080p encode, atmospheric DTS-HD MA 5.1 audio, four deleted scenes, premiere footage and a chat with the director.



## Marshland

Altitude → R2 DVD  
£16 approx



This gripping Spanish police procedural feels like a kind of Iberian *True Detective* as it follows two grizzled cops investigating the murder of teenage girls in rural Andalusia. Mixing serial killer thrills with political allegory (set in 1980, the shadow of Franco still looms large), *Marshland* proves to be a fascinating cinematic concoction laced with sumptuous visuals that cry out to be savoured in HD. Sadly, we're denied that pleasure in the UK. Still, this DVD does the best it can with its colourful anamorphic 2.40:1 transfer. A trailer and 20-minute *Making of...* are the only extra features.





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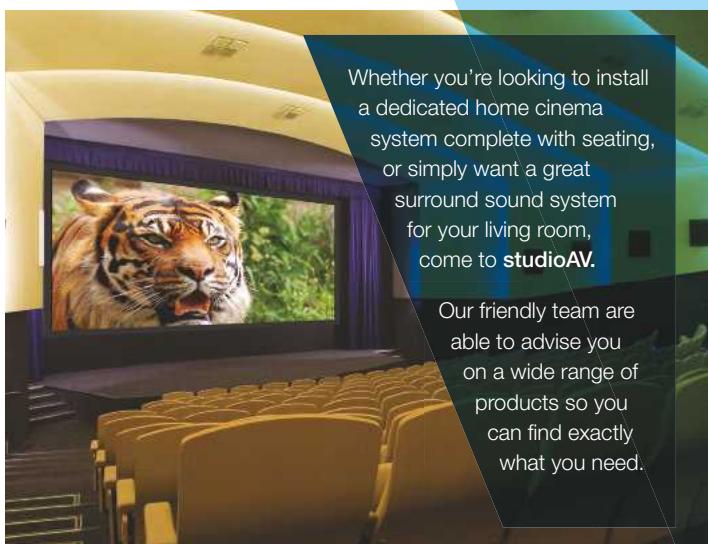
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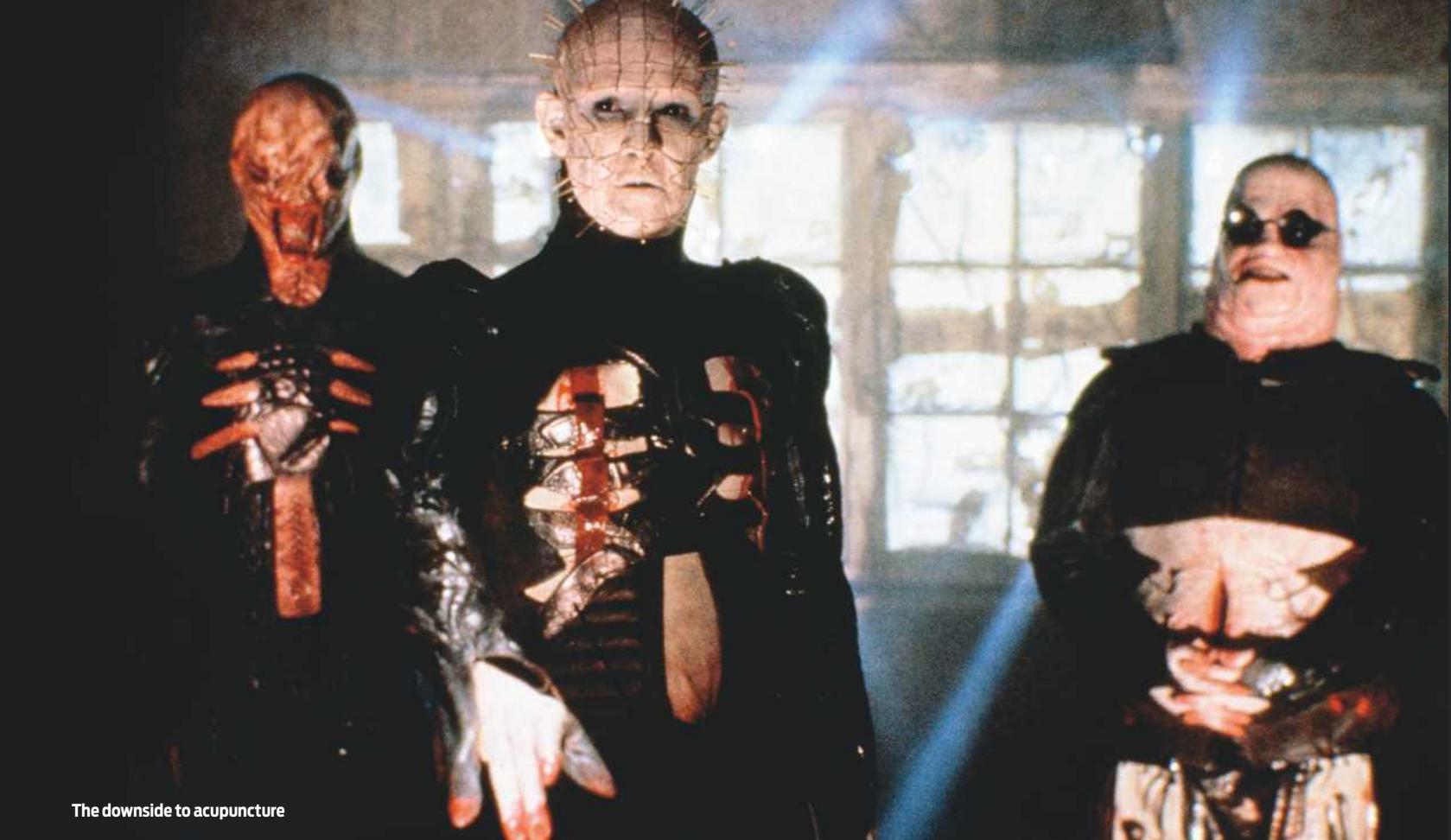
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The downside to acupuncture

# 'We have such sights to show you...'

Open the box to unleash visions of hell and a heavenly assortment of supplementary goodies

## → **HELLRAISER: THE SCARLET Box**

Limited to just 5,000 copies, this bumper boxset collects together the first three *Hellraiser* films. Clive Barker's 1987 original remains a modern horror masterpiece that still has the power to shock. The following year's *Hellbound: Hellraiser II* is a more uneven affair that doesn't quite succeed in opening up the mythology, but still unleashes plenty of nightmarish pleasures for horror hedz. Then *Hellraiser III: Hell on Earth* takes the series mainstream, but still mines some interesting concepts on the run up to the overblown silliness of its gore-strewn finale.

**Picture:** All three films have been restored at 2K from 35mm interpositive elements by Arrow (with the first two signed-off by director of photography Robin Vidgeon) and the results are very impressive.

Compared to Starz's original 2009 platter, Arrow's 1.85:1-framed 1080p encode of *Hellraiser* has a much more organic appearance, with far more native film grain present. Contrast and clarity also take a major step forwards in quality, helping resolve additional fine detail. Shot the following year with many of the same crew, it's hardly surprising that the 1.85:1 encode of *Hellbound...* looks very similar.

The decision to aim for a bigger audience with *Hellraiser III...* results in a significant aesthetic change, with cinematographer Gerry Lively giving the film a far glossier appearance. Once again, Arrow's 1.85:1 restoration captures the new look well, with a refined grain structure and excellent shadow detail.



### HCC VERDICT

**Hellraiser: The Scarlet Box**  
→ Arrow Video → Region B BD  
→ £50 approx

**WE SAY:** Beautiful restorations and astonishing extra features make this boxset a must-own

**Movie** ★★★★★

**Picture** ★★★★★

**Audio** ★★★★★

**Extras** ★★★★★

**Overall** ★★★★★

The clarity and sharpness of the image also aids the many split-diopter shots used to give the image deeper focus.

The only (insurmountable) issue is the huge drop in quality (and change in framing) that occurs when watching the additional scenes during the 'alternate unrated version' of the film. This is because the original 35mm elements for these sequences couldn't be found, meaning that a pan-and-scan LaserDisc was the best available video master...

**Audio:** All three films feature lossless presentations of their original stereo soundtracks, while the first two also receive DTS-HD MA 5.1 remixes. While the first and third films suffer from occasional sync issues resulting from ADR, all three stereo tracks sound as good as you could hope for, disgorging the sonorous tone of Pinhead's voice perfectly, not to mention Christopher Young's unforgettably operatic scores for the first two films.

The two 5.1 remixes are rather unremarkable affairs. While the additional bass is appreciated, surround effects tend to be rather disjointed.

**Extras:** In addition to a wealth of commentaries, interviews, archival EPK material, galleries, trailers and TV spots, each film is joined by part of a mammoth new documentary exploring the making of *Hellraiser* (89 mins), *Hellbound...* (121 mins) and *Hellraiser III...* (32 mins). As mentioned above, the third film also features an 'alternate unrated' cut.

Finishing things off is a bonus disc housing two of Clive Barker's early short films, plus a magnificent 200-page hardback book, a poster and five art cards.

## The Lazarus Effect

Lionsgate → Region B BD  
£15 approx



*Re-Animator* meets *Flatliners* (with a side order of *Lucy* thrown in for good measure) in this middling fright flick about a group of scientists working on a serum designed to resuscitate the dead. But when they have to use the serum on one of their own (Olivia Wilde) following a freak lab accident, they find out that it actually does a whole lot more. Shot in 4K, *The Lazarus Effect* arrives on BD with an immaculate 2.40:1 1080p transfer, while the DTS-HD MA 5.1 mix puts the surrounds and sub to good use for scares. Extras take the form of two *Making of...* featurettes and a reel of deleted scenes.



## Spasmo

88 Films → Region B BD  
£13 approx



Best known today for the notorious *Cannibal Ferox*, Italian filmmaker Umberto Lenzi enjoyed a varied career that also took in Westerns and crime movies, as well as a few early Gialli. This 1974 film about a man who believes he has killed someone, only for the body to vanish, is a restrained affair that favours torturous twists over blood and gore – and is all the better for it. Boasting a healthy bitrate and strong colours, *Spasmo* is one of the best-looking titles yet in 88 Films' 'Italian Collection'. As well as giving viewers the choice of Italian and English audio, the disc also offers a Q&A with the director.



## Turbo Kid

Lionsgate → Region B BD  
£15 approx

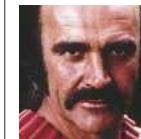


Set in the futuristic wastelands of 1997, this loving homage to the g(l)ory days of post-apocalyptic action/adventure films follows bike-riding scavenger The Kid (Munro Chambers) as he does battle with an evil warlord (Michael Ironside) to save his only friend (Laurence Leboeuf). Equal parts *Mad Max* and *BMX Bandits*, with lashings of blood, *Turbo Kid* is an absolute blast and really delivers the goods on Blu-ray with its colourful 2.40:1 Full HD visuals and dynamic DTS-HD MA 5.1 sonics. A 23-minute *Making of...* and *T is for Turbo* short film are also included.



## Zardoz

Arrow Video → Region B BD  
£18 approx



Best known as the film where Sean Connery runs around in thigh-high boots and a red diaper, John Boorman's 1974 mythically-inspired sci-fi curio is the sort of film that really benefits from the deluxe treatment it's been given here. Not only does the superb 2.35:1 1080p encode restore the majesty to the film's striking visuals (the DTS-HD MA 3.0 mix is no slouch either), the disc also serves up a staggering array of incisive extras – including a commentary and over an hour of new interviews – that help peel back the layers on this unusual yet fascinating piece of cinema.



# Satisfyingly scary spook-show

Horror trilogy goes back to the beginning for its finale and leaves us wanting more

## → INSIDIOUS: CHAPTER 3

In the best instalment yet in the supernatural fright franchise from the people behind the *Saw* movies, psychic medium Elise Rainier (Lin Shaye) comes out of self-imposed retirement to help a bedridden young girl battle the ghosts that are plaguing her.

While the previous *Insidious* films told a linked story, this third outing dials back the clock in order to allow Shaye's character to take centre stage. It's a canny decision that gives the film considerable emotional depth as the character must battle her own demons as well as the more literal ones.

Praise must also go to series writer and actor Leigh Whannell who makes his directorial debut here (previous franchise helmer James Wan was too busy playing cars with Vin Diesel in *Fast & Furious 7*). Not only does he get excellent performances from the cast, he also proves capable of conjuring up some truly nightmarish scenes, not least one where the malevolent spirit's teenage victim (Stefanie Scott) lies incapacitated on the floor as something stalks slowly around her, shutting off all remaining sources of light.

*Insidious: Chapter 3* is an effective piece of jump-scare filmmaking. And one populated by well-developed characters that you can actually believe in. Call us pleasantly surprised.

**Picture:** This Blu-ray release conjures up a wonderful AVC-encoded 2.40:1 1080p encode. Colours are stable and varied, veering from warmly saturated reds to the ice-cold blues of the Further, while flesh tones look natural. Black levels appear infinitely deep, while the excellent shadow delineation helps



keep you looking for hints of the horrors that may be lurking in the dark. Indeed, fine object detailing is a real strong point for the encode, with finely-honed textures evident in every shot.

**Audio:** *Insidious: Chapter 3*'s DTS-HD MA 5.1 track follows the tried-and-trusted approach of 'quiet-quiet-LOUD'. Thankfully, the mix's dynamic range is more than up to the task; just as happy with hushed dialogue as it is with sudden bursts of screeching strings that will have you leaping out of your recliner. The soundtrack's use of surround and bass channels is also first-rate.

**Extras:** Best of the disc's modest assortment of extras are the three behind-the-scenes featurettes (*Macabre Creations*, *Stunts: The Car Crash* and *Origin Story: The Making of Chapter 3*). Rather less exciting are a chat with a 'real' psychic medium and another with soundtrack band Cherry Glazerr. Rounding things off are three deleted scenes.

## HCC VERDICT

### Insidious: Chapter 3

→ Entertainment One → Region B BD  
→ £23 approx

**WE SAY:** The third time really is the charm for the popular horror franchise with this enjoyably scary sequel

**Movie** ★★★★★

**Picture** ★★★★★

**Audio** ★★★★★

**Extras** ★★★★★

**Overall** ★★★★★



# Filmmaker casts a long shadow

Blu-ray boxset celebrates Otto Preminger's impact on the Hollywood crime movie

## → THE OTTO PREMINGER FILM NOIR COLLECTION

While his name may not carry quite the same cachet as the likes of Billy Wilder or Howard Hawks these days, Otto Preminger stands alongside them as one of the most influential Hollywood directors of the 1940s and 1950s. And although he worked across various genres over the course of five decades, he remains famous for his pioneering crime dramas – three of which are collected together in this boxset.

*Fallen Angel* (1945) stars Dana Andrews as a destitute huckster who becomes romantically involved with two women, only to end up a prime suspect when one of them is murdered.

*Whirlpool* (1949) mixes together film noir, melodrama and 'dime-store Freud' with its story of a troubled socialite (Gene Tierney) whose kleptomania makes her a prime target for the machinations of a sinister hypnotist (José Ferrer).

Last, and best, is *Where the Sidewalk Ends* (1950), which reunites Preminger with Dana Andrews and Gene Tierney. This brutal and atmospheric film tells the story of a weatherbeaten cop (Andrews) who accidentally kills a two-bit gambler during a scuffle, only to fall in love with a woman (Tierney) who is the daughter of the man the police think responsible.

**Picture:** While there's no indication that this set is based on new restorations rather than older off-the-shelf 2K masters, the upgrade from earlier DVD releases is still massive. The trio of 1.37:1 1080p



Bill couldn't believe that a rival Avon salesman had got to Gloria before him



encodes exhibit improved contrast, clarity and stability (resulting in much stronger blacks, whites and greyscale shades), as well as the expected increase in detailing.

**Audio:** The films feature clean and clear LPCM 2.0 dual-mono soundtracks. While dialogue and Foley are easy to discern, the main beneficiaries of the 'lossless' upgrades are the terrific scores by David Raksin (*Fallen Angel* and *Whirlpool*) and Cyril J. Mockridge (*Where the Sidewalk Ends*).

**Extras:** Each film is accompanied by a chat-track from film critic Adrian Martin, plus the original trailer. *Fallen Angel* adds a 76-minute audio interview with Preminger recorded in 1972. The set comes bundled with a small but informative booklet about the films.

## HCC VERDICT

### The Otto Preminger Film Noir Collection

→ BFI → Region B BD → £60 approx  
**WE SAY:** Not the most lavish boxset, but still a solid hi-def showing for these three criminally good films

Movie	★★★★★
Picture	★★★★★
Audio	★★★★★
Extras	★★★★★

Overall ★★★★★

## Dog Day Afternoon: 40th Anniversary Edition

Warner Bros. → All-region BD  
£18 approx



Al Pacino is on electrifying form in this celebrated 1975 heist flick based on a true story. He stars as a bisexual bank robber who, along with his slow-witted friend (John Cazale), finds

himself surrounded by hundreds of cops and holding bank staff hostage when what should have been a simple job goes off the rails. In addition to a robust AVC 1.78:1 1080p encode and modest DTS-HD MA mono soundtrack, this hi-def outing features a chat-track, four *Making of...* featurettes, vintage promo and trailer. Sadly missing is the bonus disc devoted to actor John Cazale that accompanied the US release.



## School for Scoundrels

StudioCanal → Region B BD  
£23 approx



While other studios still claim that there's no market for catalogue titles on Blu-ray, StudioCanal remains committed to showcasing the best of vintage British comedy on the format. This 1960 comedy pits Ian Carmichael and Terry-Thomas against each other in a game of one-upmanship as they vie for the attentions of the lovely Janette Scott. This Blu-ray platter features a superb-looking 1.66:1 Full HD black-and-white restoration accompanied by crystal-clear LPCM 2.0 dual mono audio. Limited extras consist of a trio of interviews and the film's original trailer.



## A Snake of June

Third Window Films → Region B BD  
£18 approx



A bored wife is blackmailed into performing increasingly public displays of sexuality in Shinya Tsukamoto's complex and creepy 2002 study of repression. Shot in black-and-white on 16mm film but printed on 35mm with a heavy blue tint, *A Snake of June* boasts a distinctive visual style that this Blu-ray's new 1.33:1-framed restoration serves up nicely (although there are curious damage lines evident at the top of the screen on every single edit). Extras include a new interview with the director, an archival *Making...* of video and a collection of trailers.





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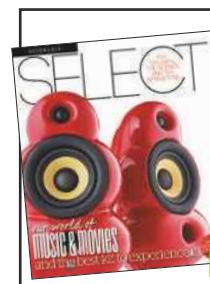
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Above average	
Acceptable	
Disappointing	
Dire	

## TOP 10 &gt; TELEVISIONS

All prices are approx and may have changed

**Sony KD-75X9405C → £7,300**

This giant TV offers an irresistible blend of top-spec Ultra HD visuals and bassy, immersive audio. The direct LED backlight provides nuanced contrast; HDR support is promised via an imminent firmware upgrade. HCC #250

**Samsung UE65JS9500 → £6,000**

Not cheap, but that's the only real downer about Samsung's range-topper. The super-bright 4K panel is ready for incoming HDR/UHD BD content; performance is excellent. HCC #246

**LG 55EG960V → £3,800**

LG's second-gen 4K OLED display boggles with its black levels and detailing, and is a joy to drive via the WebOS 2.0 interface. No HDR support via HDMI, though. HCC #250

**Panasonic TX-50CX802 → £1,500**

This 50-inch still packs Panasonic's premium processing and Smart skills. Performance is the best yet from the brand's LED stable, with excellent presets and backlight uniformity. HCC #252

**Panasonic TX-50CX700 → £900**

4K needn't be the preserve of those with big wallets seeking big displays. This 50-incher impresses with its Firefox-powered UI, vibrant colours and slender design. HCC #252

**Samsung UE55JS8500 → £2,300**

While shorn of some of the features of the JS9500 flagship (most notably the full-spec One Connect box), this step-down HDR set still packs a picture-quality punch. HCC #251

**Sony KD-55X8505C → £1,300**

With neither the large speaker array or ultra-slim design of more expensive Sony 4K TVs, this modestly-priced Android set's main attraction is its sharp, colour-rich visuals. HCC #251

**Loewe Connect 55 → £2,800**

Superb video processing and onboard PVR functionality are the highlights of this 55in 4K screen, but the lack of UHD streaming services, and a clunky interface, disappoint. HCC #249

**LG 65UF850V → £2,500**

A good (but not brilliant) all-round package, mixing a 4K IPS panel, WebOS 2.0 interface and a sleek design. Image quality suffers from average blacks and fussy motion. HCC #249

**Sony KD-65X9005C → £3,500**

This set's stunning design – it's Sony's thinnest ever TV – and colour-rich, sharp 4K visuals impress. However, the Android TV OS feels a little undercooked at present. HCC #249

## TECH INFO: TELEVISIONS



**What? No plasma?**: The TV market is now dominated by LED-lit LCD screens. Manufacture and sale of plasma display panels (PDPs), which previously came into play above 42in, has ceased. With LED comes newer technologies. 4K models with a native resolution of 3,840 x 2,160 should at least be on your audition list if you're thinking of a new display; curved models are a consideration if you want to impress the neighbours. Look out for sets claiming support for HDR content, which is part of the forthcoming UHD Blu-ray spec.



**Active or Passive**: At the beginning of the 3D era, most TVs featured the Active system that uses relatively expensive, powered 3D specs to deliver full-res images to each eye. Passive 3D TVs, which are now more common, have a filter over the screen and use non-powered specs with polarising filters. The glasses are cheap as chips, but the resolution of Full HD 3D is halved to 540 lines horizontally (but remains at 1,920 vertically). The same halving occurs with a 4K screen. Some brands offer both Passive and Active models, depending on the panel used. Glasses-free 3D, heralded by Toshiba's early ZL2 TV, hasn't caught on. The tech is still being worked on, though.

## TOP 5 &gt; BLU-RAY MOVIES

**Fast & Furious 7: Extended Edition**

A robust AV presentation (including bass-rich DTS-HD sonics) and good bonus features make this another essential purchase for fans of the stunt-packed motor franchise.

**CHAPPIE**

The third sci-fi from director Neill Blomkamp (*District 9, Elysium*), *CHAPPIE* feels like a mixture of *Short Circuit* and *Boyz n The Hood*. Entertaining then, and this BD release looks as crisp and detailed as they come.

**Exodus: Gods & Kings**

This big-budget biblical epic from Ridley Scott doesn't capture the narrative highs of *Gladiator*, but dazzles with its SFX-laden set-pieces and looks and sounds astonishing on this hi-def platter.

**Mad Max: Fury Road**

It's back to the outback in this action epic that mixes a lean narrative with astonishing set-pieces. The disc's Dolby Atmos soundtrack is a delight, and image quality is pin-sharp. Instant reference status!

**Interstellar**

Christopher Nolan's monster-budget cerebral sci-fi is a real Blu-ray showcase, with its IMAX-shot footage deserving of the biggest screen you can find, and Hans Zimmer's score sounding simply stunning.



## TOP 10 BLU-RAY PLAYERS

All prices are approx and may have changed

**Oppo BDP-103D → £600**

Oppo's first deck for two years was worth waiting for. The universal BDP-103EU featured a class-leading build and all manner of bonus goodies, including twin HDMI inputs. AV performance was faultless, and the onscreen menus superb. This newer model, the BDP-103D, adds Darbee Visual Presence processing for you to play with. *HCC #228*

**Pioneer BDP-LX88 → £1,300**

The Japanese corp returns to the disc-playing high-end with a universal deck that weighs more than your AVR and drips with user tweaks and processing features. Stonking performer. *HCC #246*

**Oppo BDP-105D → £1,100**

This heavyweight deck builds upon the premium picture performance of the BDP-103D with a wealth of audiophile upgrades – if you're serious about music, check it out. *HCC #234*

**Arcam FMJ UDP411 → £1,200**

Pristine visuals – including upscaled SD – and a classy sonic performance grant this Arcam instant appeal. The design and build is commensurate with the premium price tag. *HCC #244*

**Sony BDP-S7200 → £220**

A Sony deck without the curious angular design, the BDP-S7200 offers SACD support, hi-res audio streaming and 4K upscaling that's worth investigation. Not too pricey, either. *HCC #239*

**Pioneer BDP-LX58 → £500**

Short on 'net content and a bit slow in use, but these are minor complaints – this model (which ranks below the BDP-LX88) is a gorgeous, thoroughbred Blu-ray performer. *HCC #250*

**Panasonic DMP-BDT700 → £500**

Claiming THX-certified 4K upscaling and HDMI 2.0 60p passthrough, this mid-range deck from Panasonic is a good partner for a modern display. Great audio option, too. *HCC #237*

**Samsung BD-J7500 → £170**

This well-priced spinner offers twin HDMI outputs and multichannel phono audio for flexible system hookup, an appealing design, Smart features and solid AV chops. *HCC #247*

**Panasonic DMP-BDT370 → £100**

A solid deck at a great price, the DMP-BDT370 packs 4K scaling and JPEG playback into its full-width design. Let down by the dated Smart platform, although VOD options are good. *HCC #251*

**Toshiba BDX5500 → £120**

The key attraction of Toshiba's £120 player (aside from its 3D, Miracast, 4K scaling and DLNA features) is its small form factor and vertical alignment. Good for space-tight setups. *HCC #238*

## TECH INFO: BLU-RAY PLAYERS

**Matching your deck to your AV receiver:** Blu-ray decks are designed to deliver top-notch images but Blu-ray is also about enjoying superior quality sound. When choosing a player, bear in mind the connectivity and decoding features of your AV receiver. If you're still using an older model that doesn't offer HDMI inputs, then you'll need a Blu-ray player with multichannel analogue audio outputs to enjoy decoded hi-res surround sound formats. Similarly, older but still HDMI-equipped receivers may not be able to cope with 3D video/4K output signals, in which case you'll need a deck with dual HDMI outputs – one channelling audio to your receiver amp, the other piping video direct to your TV.

**What about the PlayStation?** Sony's console still represents an easy path to hi-def heaven. For a low-budget home cinema system, the £150 PS3 Super Slim makes a decent choice – especially if you like playing games. Control via a joypad is a pain, though, and the console runs more noisily than most BD spinners. The more expensive PS4 is a much better gaming machine, and now available in a 1TB version.



## DEMO DELIGHT

**Tomorrowland:** The first flick released theatrically in the wide colour, HDR-toting Dolby Vision format, this bonkers sci-fi looks sumptuous on 1080p BD – colour saturation and detailing of the 2.20:1 encode is exemplary.

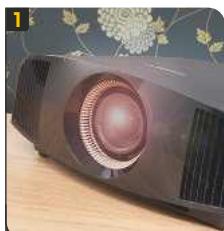
# Starscape fibre optic lighting

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Photo courtesy of UK Home Cinemas

## TOP 10 PROJECTORS

All prices are approx  
and may have changed**Sony VPL-VW300ES → £5,800**

Auditioning the newest, most affordable member of Sony's 4K range is a no-brainer. It loses a shade of brightness and the lens memory feature of its VPL-VW500ES stablemate, but retains the cinematic verve. Top of the class. HCC #243

**Epson EH-LS10000 → £6,000**

Debuting a laser light source (30,000 hours) and Epson's 4K enhancement processing, this large chassis model is a cinematic triumph. Essential audition for a dedicated room. HCC #247

**JVC DLA-X500R → £5,000**

Armed with a more adept third generation of the brand's proprietary e-shift technology, the X500R continues JVC's winning ways – contrast rich, sharp and full of tweaks. HCC #232

**Epson EH-TW7200 → £1,900**

Priced to appeal to those unable to dabble in the £3,000 market, Epson's mid-ranger is a great purchase. No frame interpolation on offer, but colours, contrast and brightness impress. HCC #232

**Optoma HD50 → £1,000**

With a retweaked user interface that improves upon previous Optoma light-cannons, the 12V-trigger-toting HD50 is a brilliant budget buy. HCC #239

**Optoma HD91+ → £3,500**

This LED/DLP Optoma claims a 20,000-hour lamp life. Setup features include a 1.9x zoom and image quality is generally excellent. Close in price to JVC's 4K eShift line, however. HCC #252

**BenQ W1070+ → £650**

An accomplished low-budget DLP model, the W1070+ offers ISF-certified calibration and a 12V trigger in conjunction with a sharp, bright, detailed performance. Bit of a bargain! HCC #240

**Philips Screeeno HDP1590 → £1,500**

Neatly designed, the Screeeno offers ultra-short throw projection thrills, albeit at 720p (and the DVB tuner is SD). Good speakers and networking skills complete a nice package. HCC #233

**ViewSonic PLED-W800 → £500**

Portable (but not battery-powered) LED-lit PJ with 1,280 x 800 res. BDs look decent on a large screen, with nice colour punch, and it incorporates a useful media player. HCC #247

**Acer H6520BD → £550**

Offering a Full HD resolution and ready for 3D, this budget beamer is a decent no-frills option. No lens shift, and zoom is pegged at 1.1x. Images are bright and well-contrasted. HCC #252

## TECH INFO: PROJECTORS



**Installation:** Although projectors can be temporarily placed on a cupboard, stand or shelf situated at the rear of the room (use the adjustable feet on its base to level the image so that it aligns with the screen), a much better long-term solution is to mount it on your ceiling with an appropriate bracket. Projectors can be quite heavy, though, so it's important to ensure that the bracket is attached firmly – ideally, it should be secured to a joist. Position your PJ so that an imaginary line from its lens to the opposite side of the room hits the screen exactly half-way along its width. The location of your screen should therefore dictate where your projector is. A decent tape-measure or laser pointer will help you to determine the position.

**Throw distance:** Throw distance specifies the distance between the projector and screen for a focused image of given size. As the vast majority of projectors are equipped with a zoom lens, minimum and maximum throw distances are often specified – say, 3.01m to 6.08m for a 100in. 16:9 image. Shorter throw distances are ideal for smaller rooms, and longer ones for larger rooms. Simple.

**Throw ratio:** Sometimes, a manufacturer will quote a throw ratio rather than a throw distance. This is basically the throw distance divided by the image width. To get the projected image size, divide the distance between projector and screen by the specified figure. Once again, the inclusion of a zoom lens means that upper and lower figures are usually specified.

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## TOP 10 SPEAKERS

All prices are approx  
and may have changed**Monitor Audio Gold 300AV → £7,150**

MA revamps its Gold Series and we pay serious attention. This big-ticket package excels across the frequency range, offers exquisite design and packs setup flexibility via the dipole/monopole FX surrounds. HCC #251

**Q Acoustics 3000 5.1 Cinema Pack → £700**

A superior compact package with driver improvements over the previous 2000i series. The two-way cabinets and dual-driver sub combine to offer impressive audio for the money. HCC #247

**B&W 683 Theatre 5.1 → £2,750**

The first step on the floorstanding ladder in B&W's speaker stable, the 600 Series incorporates new tweeter and bass driver designs and offers absurd value for money. HCC #234

**KEF R Series 7.1 → £6,500**

A 7.1 array mixing dipolar and direct surrounds, this authoritative package takes its cues from KEF's Blade concept speaker and offers faultless, largescale home cinema sonics. HCC #217

**Artcoustic Spitfire SL 7.2 → £17,000**

Slimmed-down cabinets now even easier to install on-wall or behind a screen, with a multi-driver design ensuring they're easy to drive to high SPLs. Ideal for dedicated rooms. HCC #233

**Wharfedale Diamond 220 HCP → £850**

This package offers a lot for less than a grand – two-way surrounds, a potent three-driver centre channel and agile subwoofer. Great movie sound and excellent build. HCC #248

**Pioneer S Series 5.0.4 → £2,150**

With Atmos-upfiring drivers incorporated into the cabinets (both the front floorstanders and surround standmounts) this is a neat way of upgrading your system. Bassy, fulsome sound. HCC #247

**SVS Prime Satellite 5.1 → £1,000**

These satellites are the smallest speakers from the US marque – but still sizable enough to deliver an impressive full-range performance. Quality subwoofer, too. HCC #249

**PMC Twenty Series 5.1 → £12,500**

A classy option for those with an audiophile bent, the Twenty Series majors on an oh-so-expressive mid-range and supremely well-integrated bass. Not an impulse buy, though! HCC #250

**Tannoy HTS-101XP → £700**

A great sub/sat option, Tannoy's coaxial drivers excel at treble details; the new dual-driver subwoofer delivers the bottom end with gusto. Decent styling, too. HCC #252

## TECH INFO: SPEAKERS



**Centre speaker:** Handles most of the dialogue and onscreen effects. Should be positioned above or below the screen as close to it as possible. Of course, if you're using a projector screen, it should ideally be placed behind it.

**Front speakers:** Left and right speakers should be positioned either side of the screen, in line with the centre. Turn the speakers in slightly to face the listener if there isn't an even movement of sound across the front of the room.

**Subwoofer:** Can be positioned wherever it sounds best or can be tucked out of sight due to the non-directional nature of low-frequency signals. Be aware that close positioning in corners or next to walls can create a boomy effect.

**Surrounds:** Position alongside the listener, pointing in or slightly behind the ears for a good surround effect. The back wall is not a good position for surrounds – it is, in fact, where you should locate the sixth and seventh speakers (rears) in a traditional 7.1 array.

## DEMO DELIGHT

**Mad Max: Fury Road:** This outback actioner comes complete with an inventive, detail-packed Dolby Atmos soundtrack that has to be heard to be believed. Music and atmospheric effects are regularly shunted into the height channels, the subwoofer puts in a serious shift, and object placement is remarkable. Play it loud!

At the top of everyone's shortlist



## TOP 10 AV RECEIVERS/AV PROCESSORS

All prices are approx  
and may have changed**Onkyo TX-NR3030 → £2,500**

The current king of Atmos AVRs, this 11-channel design enables four height speakers to be added to an existing 7.1 array with ease. Lithe on its feet and with exemplary steering, this is multichannel audio at its best. *HCC #245*

**Denon AVR-X7200WA → £2,500**

Capable of being upgraded to DTS:X later in the year, and sporting HDCP 2.2 support, this Atmos AVR is as futureproofed as it gets. Only a nine-channel design, though. *HCC #248*

**Denon AVR-X5200W → £1,700**

Offering Atmos – and Auro-3D via a paid upgrade – the Denon X5200W offers nine amp channels and 11.2 processing. Energetic sound and flexible setup. *HCC #243*

**Onkyo TX-NR838 → £1,000**

A nicely-specced mid-range AVR, offering 5.1.2 Atmos playback (as well as regular 7.1) in addition to HDCP 2.2 support, which will please future-gazers. Crisp-sounding sonics. *HCC #240*

**Arcam AVR750 → £4,000**

If all you want from an AV receiver is vast power and effortless performance, this high-end 7.1-channel beast is tailored to you. Little bonus features beyond audio networking. *HCC #225*

**Yamaha RX-A3040 → £2,000**

This superb Atmos-ready flagship AVR features a fluid, dynamic sonic signature, slick operation and reassuringly robust design and build. Good in stereo mode, too. *HCC #239*

**Yamaha RX-A550 → £550**

Only a 5.1-channel model – and subsequently not endowed with Atmos/DTS:X chops – the RX-A550 impresses with its audio performance, design and networking features. *HCC #252*

**Cambridge Audio CXR120 → £1,500**

This Brit-designed 7.2-channel receiver focuses on performance and ignores object-based audio and built-in Bluetooth. Sound quality is assured and construction is monstrous. *HCC #251*

**Pioneer VSX-930 → £500**

Operation could be smoother, but there's no doubting this bargain-priced 7.2-channel AVR (with Dolby Atmos) when it comes to precise multichannel delivery. *HCC #249*

**Sony STR-DN860 → £400**

No sign of Atmos or DTS:X support, but this budget Sony impresses in other areas. Setup and operation is the best in the business and it attacks movie mixes with gusto. *HCC #250*

## TECH INFO: AV RECEIVERS



**Tackling new heights:** A recent innovation in AVR circles is the introduction of Dolby Atmos, the object-based sound format that has taken off in commercial cinemas and is supported in the home by the likes of Onkyo, Pioneer, Denon, Marantz and Yamaha. This requires new height speakers in addition to a regular 'flat' 5.1 or 7.1 speaker configuration. The heights can either be physically mounted in/on your ceiling, or provided via up-firing reflective models. Setup can be complex, but the results are certainly impressive. Atmos-encoded Blu-rays are a bit thin on the ground, but you can use Dolby Surround post-processing with regular 5.1/7.1 soundtracks to get the most from your new AVR/speakers. Rivals to Atmos are Auro-3D, which uses height speakers in a different configuration, and the forthcoming DTS:X. Most AVR brands have already pledged support for the latter.

**How much power?**: Many of the mass-market AV receiver manufacturers are involved in a specifications race to see who can say their model is the most powerful, which can be confusing for consumers. For instance, both Krell's £7,000 S-1500 seven-channel power amp and Yamaha's £500 RX-V675 both claim 7 x 150W – the important part is that Krell's figure is into an eight-ohm load with all channels driven, and that Yamaha's is with one channel into a four-ohm load, which is hardly a real-world situation. The best advice is ignore the numbers game and get a demo of your desired AVR with the same, or similar, speakers that you intend to partner it with.

## TOP 5 BONUS FEATURES

**Kingsman: The Secret Service Revealed**

A lengthy (92-minute) doc that is a must-watch for fans of the kinetic British comic book adaption, this looks back at the movie's origins and delves deep into its production.

**The Science of Interstellar**

From black holes to the search for planets that can support life, this engrossing 50-minute doc (narrated by Matthew McConaughey) explores the scientific rationale that lies at the heart of the recent sci-fi epic.

**Keepers of The Covenant: The Making of Exodus**

Another great *Making of...* doc supporting a Ridley Scott flick, this 153-minute, seven-part feature covers everything you could possibly want to know about the film's production.

**Eaten Alive**

Lurking in the extra features on 88 Films' Blu-ray release of *Zombi Holocaust* is this fascinating 85-minute documentary exploring Italian cinema's love affair with cannibal horror flicks.



This 30-min interactive feature on the *Fast & Furious 7: Extended Edition* Blu-ray works well in place of a regular commentary. Motor-mouth director James Wan is a great host as he discusses key production aspects.

## TOP 10 SUBWOOFERS

All prices are approx  
& may have changed**SVS SB-2000 → £650 ★★★★★**

This follows up to the SB-1000, which incorporates a new 12in driver and revamped Sledge DSP amplifier, offers immense value for money. A mid-sized woofer that imbues your Blu-rays with potent LFE, the SB-2000 sounds quick and taut, and is a perfect introduction to what a truly good sub can accomplish. HCC #233

**REL 212SE → £2,750 ★★★★★**

Lush design joins engineering nous in this premium sub with two active 12in drivers supported by a pair of passive radiators. Loud, deep and impactful, your BDs are in safe hands. HCC #246

**JL Audio Fathom F212 → £5,900 ★★★★★**

The US brand arrives in the UK in style – this 2 x 12in, 3,000W brute not only looks gorgeous, it's capable of a mindblowing performance. Got a big room? Get one of these! HCC #214

**REL S-5 → £1,600 ★★★★★**

A step up from REL's affordable T series, this 12in model is large and weighty, with a performance level to match. Fast and tight but capable of dropping very low indeed. HCC #234

**Bowers & Wilkins PV1D → £1,200 ★★★★★**

One of the coolest-looking subs on the planet, B&W's PV1D uses DSP trickery to craft an opulent low-end performance. The touch-sensitive OLED display is pure class. HCC #212

**Eclipse TD520SW → £3,000 ★★★★★**

This twin 8in woofer, driven by ICEpower amplification, aims for ultimate speed and tone – and succeeds. Simply put, the TD520SW is worth every penny of its asking price. HCC #249

**BK Electronics P12-300SB-DF → £475 ★★★★★**

Bass heads can get outrageous value for money in the shape of BK's overperforming 12in sub. A front-firing model is also offered, and other finishes knock the ticket down to sub-£400. HCC #247

**JL Audio E-Sub e112 → £2,050 ★★★★★**

This 12in, 1,500W model from JL Audio's 'entry-level' line seems pricey, but its performance, design and tuning options make the investment oh-so worthwhile. HCC #240

**REL Habitat 1 → £1,300 ★★★★★**

With its LongBow wireless system and wall-mountable design, REL's newest woofer is aimed at those seeking discreet bass. Twin 6.5in drivers work fast and with considerable grip. HCC #231

**SVS PB-2000 → £750 ★★★★★**

The ported sibling to the SB-2000, this woofer uses the same driver and amp arrangement, but in a far larger cabinet. Bass goes deeper, but not at the expense of finesse. HCC #243

## TECH INFO



**Why use more than one sub?**: Using two subwoofers (or perhaps four) should, in theory, bring huge rewards in terms of bass performance. But remember that LFE is a tricky beast to control. Running two subs may simply double problems in your room like room boom and suck-outs, where outgoing and reflected bass sounds cancel each other out. If you have some flexibility in where you place subwoofers, trial and error may well throw up some interesting results. The acoustics wizard Floyd E Toole (his book *Sound Reproduction: The Acoustics and Psychoacoustics of Loudspeakers and Rooms* is fine bedtime reading) suggests one LFE sub to either side of the room may be best for accuracy while placing them in the front corners would be best for overall bass power. Yet there is no hard and fast rule as to what will work best for every room, and you may find that simply using one (large) subwoofer is preferable as it's the easiest to get sounding right.

## DEMO DELIGHT

**Fury:** The DTS-HD 5.1 track of Brad Pitt's tank drama is truly a thing to savour, with the audio engineers striving hard to deliver a packed, detailed soundfield that puts you right in the action. And, with its frequent artillery explosions, it's no surprise to find the LFE channel getting a thorough workout. Shells hit deliciously hard with taut bass thumps, while the eponymous tank's rumbles will petrify your pets.

## TOP 5 CONSOLE GAMES

**The Witcher III: Wild Hunt**

RPG fans will lap this up. Combining a brilliant (if grim) narrative with great game mechanics, sparkly HD visuals and an exhaustive playing time, ...*Wild Hunt* makes *Skyrim* seem like a distant memory.

**Mortal Kombat X**

The king of beat-'em ups, NetherRealm Studios' newest entry into the popular franchise is strewn with gore, plays well and even lets you fight as the Predator if you fork out for the DLC upgrade...

**★★★★★****Batman Arkham Knight**

The concluding part of Rocksteady's Batman trilogy gives players an immense world to explore – everything here is bigger and better than before – and the moody, cinematic visuals are a treat for your display.

**★★★★★****Metal Gear Solid V: The Phantom Pain**

Definitely in the running for game of the year, this open-world stealth/actioner dazzles with its breadth, interaction, flexibility and lush visuals. A fitting end to the series.

**★★★★★****Dragon Age: Inquisition**

Finished with *Skyrim*? Then pick up this third instalment in the *Dragon Age* fantasy RPG series. A great-looking title, with plenty of side-quests littered around its vast open world to keep you adventuring for hours.

**★★★★★**

## TOP 10 ➤ ACCESSORIES

All prices are approx and may have changed



NEW ENTRY

**KEF R50 → £600 ★★★★★**

KEF's Dolby Atmos-enabled reflective modules are a smart choice for anyone looking to beef up their speaker system. Using the company's Uni-Q point source drivers pays real dividends, enabling full-range sonics that reach deep into your cinema room. Styling and build quality are first rate. £600 gets you a pair – you'll soon want four... HCC #252

**Devolo dLAN 650 Triple+ starter pack → £120 ★★★★★**

This package makes Powerline networking fast (claimed at up to 600Mbps) and easy. The three-port Ethernet extender is sleekly designed, and provides a regular plug socket, too. HCC #239

**Dune HD Base 3D → £250 ★★★★★**

A media player for the AV enthusiast. Full-width and fully-featured, it provides support for 3D BD rips and much more, with a slick user interface and plenty of connectivity. HCC #235

**Amazon Fire TV Stick → £35 ★★★★★**

Half the price of the standalone Amazon Fire box, this HDMI stick outguns its Chromecast and Roku rivals with more potent processing and a slicker UX. A brilliant add-on to any TV. HCC #248

**QNAP HS-251 → £300 ★★★★★**

Adding HDMI connectivity to a NAS device is surprisingly useful – and this slim-line model from QNAP is styled to grace your living room. Flawless media playback and responsive. HCC #248

**Sony SRS-X11 → £60 ★★★★★**

An affordable palm-sized Bluetooth speaker with internal rechargeable battery, Sony's SRS-X11 is supremely portable and sounds decent for the money. A neat little gizmo. HCC #249

**Philips Hue → £180 ★★★★★**

These Wi-Fi enabled lightbulbs might be expensive (this £180 starter pack includes two, plus the Wi-Fi bridge) but making your own multicoloured lighting scheme is a blast. HCC #220

**WeTek Play → £95 ★★★★★**

An Android-based media player that can be easily rebooted with open-source operating systems. The result is impressive flexibility. Additional tuner options bring PVR fun. HCC #252

**Sony PlayStation 4 → £350 ★★★★★**

The PS4 offers a killer gaming experience, with the under-the-hood power resulting in great-looking games. 3D Blu-ray playback has now been added via firmware. HCC #229

**Philips SW750M → £130 ★★★★★**

A multiroom-ready speaker that works with the Spotify Connect service, this curved cabinet offers a decent, punchy sound for the price tag. No Bluetooth, DLNA or external hookup. HCC #246

## TECH INFO: MEDIA PLAYERS



**What about my TV?**: Most flatscreen TVs from the major brands (Sony, Samsung, Panasonic, LG, Toshiba and Sharp) also incorporate media player functionality, using Ethernet or Wi-Fi to stream from your home network, or from plugged-in USB drives. Most modern Blu-ray players offer this, too. However, file support is rarely as extensive as on dedicated devices from the likes of Western Digital and A.C. Ryan, and our experience shows some are more adept at playback from USB than over a network. Nor (obviously) is a TV or BD player portable. If your media collection extends beyond JPEGs and MP3s into lossless audio rips and esoteric HD video formats, then a standalone player is a good investment.

**Storage**: You can, if you really want, store all your files on a plethora of USB drives, or on your PC, but it's best to get a NAS (Network Attached Storage) device for simplified sharing of your media across a network with multiple players, such as one from Netgear's ReadyNAS range (pictured). These dedicated devices often offer RAID array file backup, and are managed via browser software. Storage capacity can be anything from 1TB to 12TB and beyond.



## TOP 5 ➤ BLU-RAY/DVD BOX SETS

**The Decline of Western Civilisation Collection**

A four-disc Blu-ray set for Penelope Spheeris' brilliant trio of films documenting the Los Angeles music scene throughout the 1970s, '80s and '90s. Lots of extras to enjoy, too.

**The Wire: The Complete Series**

The award-winning war-on-drugs drama hits Blu-ray reframed at 1.78:1 (it was originally broadcast at 1.33:1) and looking good. An 85-minute Q&A is among the extras.

**The Long Good Friday + Mona Lisa**

Two of Bob Hoskins' most iconic roles presented in an extras-packed boxset and given thoroughly impressive HD transfers – both look wonderfully filmic.

**The Avengers: The Complete Series Five**

For this 1967 24-episode run, agents Steed and Peel gallivant around in gaudy colour rather than black-and-white, and image quality on this seven-disc set is superb.

**The Walking Dead: The Complete Fifth Season**

The hit US series shows no signs of fatigue in its fifth year, putting its characters through the ringer in a brilliant, drama-packed season. DTS-HD MA 7.1 mixes help bring the scares.

## TOP 10 SOUNDBARS &amp; SOUNDBASES

All prices are approx  
& may have changed**Canton DM75 → £450**

Bigger and bolder than the already excellent DM50 (which retails for £100 less), Canton's sturdily-built soundbase speaker lacks HDMI inputs but makes up for it with Bluetooth streaming and a brilliant 2.1-channel performance packing weight, scale and detail. Simplistic, understated design. HCC #243

**Sony HT-XT3 → £450**

A great-sounding soundbase blessed with HDMI connectivity, HDCP 2.2, Wi-Fi, Bluetooth, multiroom support, screen mirroring and app control. There's little to complain about. HCC #250

**Yamaha YSP-2500 → £800**

An HDMI-switching 'sound projector' using Yamaha's Beam tech to craft impressive surround sonics from its drivers. Efficient sub, plenty of detailing and fun/useful app control. HCC #243

**Cambridge Audio TV5 → £300**

Twin 6.5in bass drivers lend the TV5's sound some decent low-end heft, but not to the detriment of the rest of the soundstage. An enjoyable, balanced listen. Easy to use. HCC #245

**Q Acoustics Media 4 → £400**

A no-nonsense offering from the speaker specialist, which ignores HDMI inputs and daft DSP modes in favour of creating a nuanced, solid 2.1 soundscape. HCC #238

**Monitor Audio ASB-2 → £1,000**

This premium proposition marries Monitor Audio's C-CAM drivers with AirPlay and DLNA music streaming. Performance is exemplary – powerful and polished in equal measure. HCC #229

**DALI Kubik One → £800**

The Danish speaker brand brings a slice of glamour to your setup with this stylish soundbar. No HDMI or digital decoding but it packs a tight, lively and nuanced sound. HCC #248

**Philips Fidelio B5 → £450**

Detachable battery-powered side speakers let you enjoy both genuine surround sound and straight 2.1 (there's a wireless sub). And each speaker offers Bluetooth hookup. Innovative. HCC #249

**Arcam Solo Bar/Sub → £1,300**

This pricey combi from audio specialists Arcam delivers a heavyweight, pristine 2.1-channel performance. Four-in, one-out HDMI (including 4K passthrough) is welcome. HCC #249

**Orbitsound A70 → £500**

Not overly specified – there's no HDMI, for instance – but this elegant 'bar/sub combi just about justifies its price tag with an enveloping and very well-balanced performance. HCC #251

## TECH INFO: TV PLATFORMS



## TV addicts – go free, or pay-to-view?

The landscape of the UK television industry has changed hugely in the last decade. The analogue switch-off has created a competitive market in free-to-air platforms, while Sky and Virgin Media are squaring up to the likes of EE TV, Amazon Prime and Netflix. Deciding which service is right for you can be complex, and you may find your needs are best catered for by a combination.

**Sky+HD:** The long-running satcaster offers a plethora of HD channels, with content including recent movie releases, live sports and sought-after US shows. Hardware options include the 2TB dual-tuner PVR.

**Virgin Media TiVo:** The cable giant offers a three-tuner PVR (1TB) with intelligent TiVo recording tricks, catch-up apps (including Netflix and Spotify), and over 240 channels (depending on package). Premium Sky content can be added on a monthly basis.

**Freeview:** The common option when it comes to TVs and set-top boxes. Freeview offers 13 HD channels (depending on regional roll-out) plus SD and radio. No contract fee.

**Freesat:** Satellite service offering a similar – but not identical – channel lineup to Freeview, delivered to your HD flatscreen via a dish but without a subs cost. As with Freeview, budget-priced STBs are available.

**YouView:** This relatively new kid on the block integrates the UK's main catchup portals directly into a backwards EPG. Again, channels are broadly similar to Freeview and there's no contract. Humax (PVRs) and Sony (TVs) are leading the hardware charge.

## TOP 5 BACK-CATALOGUE BLU-RAYS

**Charlie Chaplin: The Mutual Comedies**

Exquisite restorations of the 12 shorts that the little master made for the Mutual Film Corporation in 1916/17. And this two-disc BD comes with some worthwhile bonus bits.

**Blood and Black Lace**

Mario Bava's genre-defining 1964 slasher makes its hi-def debut with a dazzling new 2K restoration that really gets the best out of the film's bold colour palette, alongside an exhaustive array of supplementary features.

**Goodfellas: 25th Anniversary Edition**

As far back as we can remember we always wanted a new 4K restoration of this Martin Scorsese gangster classic. And now we have one, with some new extra features, too.

**The Third Man**

StudioCanal takes a second stab at releasing this celebrated 1949 Brit-noir starring Orson Welles, rewarding buyers with an excellent image taken from a 4K restoration plus some new documentary material.

**The Day The Earth Caught Fire**

The highlight of the BFI's 'Sci-Fi: Days of Wonder' festivities, this stunning Blu-ray restoration should introduce this underrated British disaster flick to the wider audience it deserves.



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## TOP 5 PVRs

**Virgin Media TiVo, £subscription**

This triple-tuner PVR offers ultimate recording flexibility, useful features – you can undelete deleted shows! – and awesome TiVo functionality. A no brainer if you're in a cable area

**★★★★★****Sky+HD, £subscription**

Sky's channel choice is second-to-none and its twin tuner 2TB PVR is a perfect partner. The recent EPG tweak is welcome and Anytime (the push VOD service) is brilliant for catching up on new movies

**★★★★★****Humax HDR-1100S, £190**

Freesat Freetime PVR that impresses with its usability, VOD options and form factor – Humax's small, white box will slot into any kit rack. We tested the 500GB version – 1TB and 2TB models are also available

**★★★★★****Humax DTR-T4000, £subscription**

This YouView-based PVR is required to get BT Sport's new Ultra HD channel – available to those with BT fast fibre and a BT TV sub. Easy to use and with 1TB of storage

**★★★★★****EE TV Smart Box, £subscription**

This quad-tuner 1TB PVR, from the mobile/broadband corp, offers innovative Replay 24-hour channel recording and great Smart device streaming. Needs more catch-up though

**★★★★★**

## TOP 5 HEADPHONES

**Sony MDR-HW700DS, £800**

Comfy cans supplied with an HDMI surround processor, enabling multichannel audio to be fed to a virtual 9.1-channel soundstage. The effect is superb – great for late-night listening

**★★★★★****Oppo PM-1, £1,100**

Audiophile-grade, using planar magnetic driver designs, and with a lush design and build. The sound quality of the PM-1s is superb, so while these are undoubtedly costly, buyers won't be disappointed

**★★★★★****Lindy Cromo NCX-100, £100**

A cost-effective domestic option and great for travelling, these noise-cancelling 'phones (which can also be used as a normal passive design) feature a pleasant, balanced sound

**★★★★★****PSB M4UI, £220**

Aimed at both home and on-the-move use (and supplied with a carry case and two cable options), the M4U1s offer solid bass response and impactful highs. Build quality is good, as is comfort

**★★★★★****AKG K550, £200**

The styling of these closed-back cans is reassuringly 'classic' and the sound signature is surprisingly open and spacious. Use them for movie watching and you'll enjoy a good sense of scale and weight

**★★★★★**

## TOP 5 SYSTEMS

**Panasonic SC-BTT505, £600**

Two-way driver arrangements in these grown-up looking speakers (plus a dizzying range of features) make this a great purchase. Big, dynamic sound, with strong dialogue

**★★★★★****Samsung HT-J7750W, £800**

Samsung's top-dog in its 2015 lineup is similarly styled and spec'd to last year's H series model. It has a powerful, dynamic sound, but is a little rough around the edges

**★★★★★****Harman/Kardon BDS470, £650**

Harman's 2.1 system eschews 'net TV and streaming features but majors in heavyweight build quality and solid AV performance. We tested a 2.1 iteration – 5.1 is also available

**★★★★★****LG BH8220B, £650**

With its silver finish, this is a suitable one-box system to partner with LG's flatscreen TVs, with a commendable, if slightly lacking in HF finesse, sound. Additional features including CD-ripping to USB. Handy

**★★★★★****Onkyo HT-S7705, £650**

This Atmos-capable AV receiver and speaker package is an ideal entry-level setup for a forward-looking system. Loaded with features (including Wi-Fi and Bluetooth). Just add a BD deck and you're sorted

**★★★★★**

# HOME CINEMA Choice

**ISSUE #254 ON SALE Nov 19**

**→ IN THE NEXT ISSUE**

**Sonic challenger** How DTS hopes to steal Dolby's crown with its Atmos rival

**Be your own Santa!** We round up the Christmas gifts you should buy for yourself

**SFX masters** Blu-rays that'll blow you away

**→ ON TEST**

**Yamaha YSP-5600** Dolby Atmos soundbar

**Sony VPL-VW520ES** 4K projector **Amazon Fire TV**

**4K streamer** Marantz NR1606 AV receiver

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CONTENTS SUBJECT TO CHANGE – BUT ONLY FOR THE BETTER



# AV AVENGER

Don't get in a spin about vinyl or het up with hi-res downloads. It's Blu-ray you should be dancing to, says closet prog-rocker **Steve May**

**THE FUTURE OF** audio is being obscured by a fug of analogue nostalgia. Don't get me wrong, I'm pleased enough to see sales of vinyl albums boom and hi-fi manufacturers fall over themselves to release funky new record decks. But something has gone very wrong when the music news *de jour* is that Rega has released a Queen-branded turntable and Tesco is stocking Iron Maiden's latest on 12-inch. All we need is for the Labour Party to go Far Left and we'll have properly time-travelled back to the 1970s. Oh wait...

The audio format we should really be rallying behind is Blu-ray. In all likelihood, a fair number of you reading this probably have never picked up a Blu-ray Audio disc. Some may not even know they exist. It's not your fault. PR for this format variant has been apocalyptically woeful (when it first launched I was asked to justify by a PR why I should be sent a press release...).

But if you've not sampled it, may I humbly suggest you're missing out? Blu-ray disc has arguably turned into the best music format we've ever had – and it delivers no-fuss audiophile-grade performance for a snip. Come at me with your 180g vinyl and wincingly expensive turntable and I'll better it for clarity and musicality with a Blu-ray Audio disc played on a cheapie BD deck. Treat yourself to the BD Audio release of *Grrr!*, the Rolling Stones' greatest hits compilation, and see if I'm not right. Yes, yes. I know high-res audio downloads are increasingly accessible, and the range of material more inclusive than it was, but even metadata-rich downloads can't compare to the collectable frisson of an actual product.

So why isn't BD Audio a bigger buzz? It doesn't help that as an audio experience it's all over the place. Formats and offerings can vary dramatically.

Official Blu-ray Audio discs, which come in clear BD cases branded High Fidelity Pure Audio, typically offer playback in PCM and 24-bit/96kHz FLAC, always in the original stereo format, sometimes with an additional multichannel mix. The audio quality can be sublime, but the video element is usually little more than a text menu.

**The best Blu-ray music discs are often those bundled with CD special editions**, like the Super Deluxe 5.1 release of *2112* by Canadian supergroup Rush. Released a couple of years ago, this double-pack contains both a remastered CD of the album and a Blu-ray. The latter features *2112* in both 24-bit/96kHz stereo and multichannel formats. The surround mix, as mastered by Richard Chycki, is simply phenomenal. Just thinking about it gives my ears high-res goosebumps.

What's more, the entire album has been animated in comic book-style with onscreen lyrics. This may sound weird, but it works wonderfully well, particularly on the sci-fi *2112* suite itself.

Hunting down special edition high-res Blu-ray music titles is fine sport too, as they're often released with little fanfare or support. Currently topping my wants list is a remaster of Yes' prog rock fave *Fragile*. The BD in this combi package promises to be a veritable sonic treasure trove. In addition to 5.1 PCM, 24-bit/96kHz stereo and DTS-HD MA 5.1 mixes by Steven Wilson (whose work in this field has developed its own following), the disc features the original album in a 24-bit/192kHz flat transfer from original master tapes, plus a bit-perfect needle-drop of an original vinyl pressing. All topped off with a Roger Dean artwork archive. Phew! I can't wait! And I don't even like Yes! ■

*Have you got music titles in your Blu-ray collection? Let us know: email letters@homecinemachoice.com*



Digital audio diva **Steve May** does own a turntable, but he uses it as a revolving sweet tray when he's listening to his Blu-ray collection



*Photo: Spire Integrated Systems*

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